

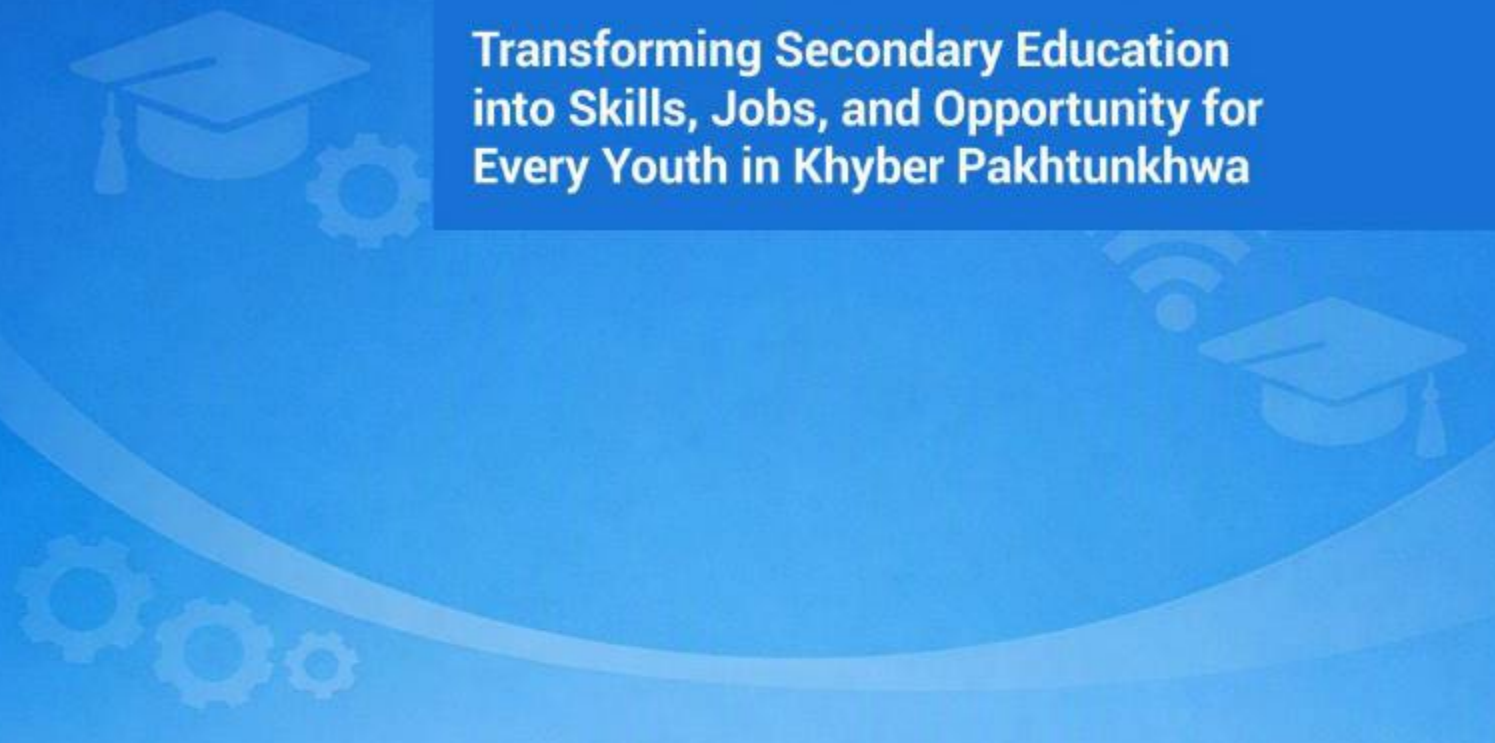


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**Transforming Secondary Education
into Skills, Jobs, and Opportunity for
Every Youth in Khyber Pakhtunkhwa**

Strategy for
**Matric-Tech in
Khyber Pakhtunkhwa**

Elementary & Secondary Education Department (E&SED),
Government of Khyber Pakhtunkhwa

**Bridging Technical Assistance
for Governments (B-TAG)**

Acronym	Full Form
ADB	Asian Development Bank
BISE	Board of Intermediate and Secondary Education
CBA	Competency-Based Assessment
CC&JP	Career Counselling and Job Placement
CoE	Centre of Excellence
E&SED	Elementary and Secondary Education Department
FBISE	Federal Board of Intermediate and Secondary Education
FDE	Federal Directorate of Education
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ICT	Information and Communication Technology
ILO	International Labour Organization
IMC	Institute Management Committee
KP	Khyber Pakhtunkhwa
KP-TEVTA	Technical Education and Vocational Training Authority Khyber Pakhtunkhwa
LMIS	Labour Market Information System
LMS	Learning Management System
MIS	Management Information System
MTSC	Matric-Tech Steering Committee
NAVTTTC	National Vocational and Technical Training Commission
NCC	National Curricula Council
NVQF	National Vocational Qualifications Framework
OJT	On-the-Job Training

PC-1	Planning Commission Form-1
PforR	Program-for-Results
PTC	Parent-Teacher Council
QA	Quality Assurance
QAB	Qualification Awarding Body
RPL	Recognition of Prior Learning
SDGs	Sustainable Development Goals
SSC	Secondary School Certificate
TSC	Technical School Certificate
TVET	Technical and Vocational Education and Training
TWG	Technical Working Group
WB	World Bank

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Executive Summary

The Government of Khyber Pakhtunkhwa has demonstrated a strong commitment to reforming and scaling the Matric-Tech programme as a strategic pathway to enhance youth employability, economic productivity, and social inclusion. However, evidence from recent assessments highlights that the existing Matric Tech models remains predominantly theory-driven, with limited practical exposure (typically 12–20%), weak industry linkages, and low employment outcomes, with fewer than 20% of graduates securing relevant employment.

In response, this strategy proposes a comprehensive transformation of Matric-Tech into a competency-based, industry-aligned and digitally enabled system, anchored in the National

Vocational Qualifications Framework (NVQF). The redesigned model introduces NVQF Level 2 Level 3 and Level 4 certifications within Grades IX and X, supported by dual certification (BISE + NVQF), credit accumulation, Recognition of Prior Learning (RPL), and competency-based assessment aligned with a marks-based system. The approach ensures both academic equivalence and labour-market credibility, addressing systemic gaps in skills recognition and employability.

The implementation will follow a phased rollout approach beginning in the 2026–27 academic year with 72 Centres of Excellence (CoEs) focusing on IT trades. This will be followed by expansion to 500 additional schools in 2027–28, as well as introducing Entrepreneurship education across all schools and piloting core vocational trades (e.g., renewable energy, electrical, mechanical) in CoEs. By 2028–29, the programme will scale to an additional 1,500 schools, ensuring province-wide access to IT and entrepreneurship streams, with gradual expansion of core TVET trades based on institutional readiness and labour market demand.

Institutionally, the strategy establishes a dedicated Matric-Tech Wing within the Elementary and Secondary Education Department (E&SED), supported by a Steering Committee and Technical Working Groups. Strategic partnerships with Technical Education and Vocational Training Authority Khyber Pakhtunkhwa and National Vocational and Technical Training Commission will ensure alignment with national standards, accreditation, and quality assurance. The programme also introduces mandatory industry engagement mechanisms, including placement requirements, apprenticeships, and Production-cum-Service Units to enhance hands-on learning and generate institutional revenue.

A key innovation of the strategy is the integration of digital systems across the entire value chain, including curriculum development, teaching-learning materials, assessment, monitoring, and certification. Learning Management Systems (LMS), digital assessment tools, and mobile-accessible content will enable scalable, standardised, and high-quality delivery, particularly in rural and underserved areas. Competency-based assessment will be operationalised through structured rubrics, weighted scoring, and minimum competency thresholds, ensuring that marks reflect actual skills rather than theoretical knowledge alone.

The strategy places strong emphasis on inclusion and gender equity, promoting female participation in non-traditional trades, enabling self-employment pathways, and expanding access to rural and mountainous districts through blended and digital learning models. It also aligns with global priorities, including SDGs 4 (Quality Education), 5 (Gender Equality), 8 (Decent Work), and green skills linked to climate resilience and sustainable development.

Financing will be phased, with the pilot supported through internal resource rationalisation under the Government's Good Governance Programme, followed by scaled investments through provincial budgets and development partners such as the World Bank, GIZ, International Labour Organization, and Asian Development Bank. A dedicated Matric-Tech Fund, supported by transparent financial management, audits, and school-level PTC/IMC governance, will ensure efficient resource utilisation.

Overall, this strategy transits a supply-driven, theory-oriented model to a demand-driven, competency-based system, integrating education with skills, employment, and entrepreneurship. By embedding industry linkages, digital innovation, and strong governance

mechanisms, the programme is positioned to become a cornerstone of human capital development and economic transformation in Khyber Pakhtunkhwa.

1 Introduction and Rationale

1.1 Context of Vocationalisation in Pakistan

Pakistan has periodically pursued the integration of vocational subjects within the general education system since the late 1960s. Early initiatives such as the Comprehensive High Schools project (1968) and the Agro-Tech project (1978) introduced practical courses like electrical work, metalwork and home economics. In 2000-2 the Technical School Certificate (TSC) commonly known as Matric-Tech was launched nationally to institutionalise vocational training within upper-secondary education. Despite these efforts, the programme has struggled to achieve its intended outcomes. Most Matric-Tech models in Pakistan allocate only 12–20 per cent of instructional time to technical subjects; delivery remains theory-oriented and industry participation is minimal. The assessment system relies largely on written examinations rather than competency-based demonstrations, and structured workplace-based learning is virtually absent. Consequently, the existing programmes function as an academically flavoured technical stream rather than a transformative skills pathway.

The Government of Khyber Pakhtunkhwa seeks to transform this situation by scaling the Matric Tech programme across the province. The decision aligns with national policies

emphasising technical and vocational education and training (TVET) as a driver of economic growth, youth employment and social inclusion. The National Vocational Qualifications Framework provides the policy anchor for this transformation, defining levels of competence and credit values while enabling credit accumulation and transfer. The framework has recently been updated and accommodating Matric Tech as well as Middle Tech introducing technical subjects at secondary level. The elementary and secondary education department (E&SED) intends to capitalise on these provisions by restructuring Matric-Tech into a labour-market responsive programme.

1.2 Rationale for Reform

Evidence from the recent assessment underscores four major challenges facing the existing Matric-Tech programme:

1. **Limited labour-market impact:** Rapid tracer studies show that fewer than 20 per cent of graduates secure employment, and only 18.8 per cent of those employed work in occupations relevant to their training. Nearly half of graduates pursue further education, predominantly in general education rather than TVET streams. These outcomes suggest that the programme functions largely as a bridge to academic progression rather than as a terminal qualification for employment.
2. **Insufficient technical content and practical exposure:** The curriculum assigns a small proportion of time to technical subjects and lacks mandatory work-based learning. As a result, graduates do not even achieve the NVQF Level 2 competence that would signal readiness for semi-skilled employment. Assessment remains theory-oriented, with little emphasis on demonstration of competence.
3. **Lack of industry engagement and recognition.** Employers to be systematically involved in curriculum design, assessment or apprenticeship placement. There is no formal mechanism for structured apprenticeships or OJT. Consequently, industry perceives Matric-Tech graduates as academically oriented and requiring further training before employment.
4. **Fragmented governance and insufficient tracking.** The programme is administered through multiple bodies such as TEVTAs, KP-Business & Technical Education Council (BT&CE), NAVTTC and the BISE without a unified governance framework. Graduate tracking systems are weak, leading to poor data on outcomes and limited feedback loops for improvement.

These challenges necessitate a comprehensive overhaul of the Matric-Tech programme. Doing so will not only increase employability but also help address broader socio-economic challenges such as youth unemployment, gender disparity, rural underdevelopment and reliance on unskilled labour migration. By aligning the curriculum with NVQF levels, integrating industry-led apprenticeships and embedding digital and green skills, the programme can produce graduates who are competitive in local, regional and global labour markets.

2 Policy and Regulatory Framework

2.1 Alignment with the National Vocational Qualifications Framework

The NVQF (Version III, 2024) defines eight levels of competency ranging from Level 1 (semi-skilled worker) to Level 8 (doctoral level). Each level is distinguished by learning outcomes in terms of knowledge, skills and responsibility. Level descriptors, adopted from the European Qualifications Framework, provide a common language for comparing qualifications nationally and internationally. The NVQF promotes credit accumulation and transfer and mandates quality assurance mechanisms. Within the framework, the **Technology Stream** is organised into Middle Tech (grades VI–VIII), Matric-Tech (grades IX–X) and Inter-Tech (grades XI–XII). Middle Tech programmes introduce basic technical concepts while continuing general education, with practical workshops and projects as core components. Matric-Tech programmes, designed for upper-secondary learners, offer dual certification whereby students earn the standard secondary school certificate and an NVQF diploma.

Under this strategy, the Matric-Tech curriculum will align with NVQF Level 2 (semi-skilled) outcomes and Level 3 (skilled) outcomes in grade IX and Level 4 (Supervisory) in grade X. Students who successfully complete Level 3 may accumulate credits towards Level 4 and so on moving toward DAE/ Level 5. Recognised qualification titles will follow NVQF nomenclature e.g., “National Vocational Certificate Level 2 in Electrical Installation”. Credit values will be assigned based on notional learning hours and national skills standards approved by NAVTTC. Assessment will be competency-based, with accredited assessment centres ensuring quality and consistency.

2.2 Provincial Legislation and Policy Coherence

Khyber Pakhtunkhwa will need to review and amend provincial legislation to enable the restructured Matric-Tech programme. Key actions include:

1. **Scheme of Studies:** The DCTE needs to approve scheme of studies for matric tech
2. **Regulatory alignment (Grading Policy/Examination Regulations:** Revise examination regulations under the BISE to allow practical and competency-based assessment and to incorporate NVQF credits into grade-promotion criteria.
3. **Integration with provincial TVET authority:** Establish a formal partnership between E&SED and KP-TEVTA for curriculum development, teacher deployment, workshop accreditation and apprentice placement.
4. **Coordination with NAVTTC and BISE/QABs:** Ensure that qualifications developed for Matric-Tech are reviewed and registered by NAVTTC and delivered through accredited institutes and assessment centres. The NAVTTC’s guidelines for development of NVQs require industry-led competency standards and Qualification Development Committees, which will be strictly followed.
5. **Parent Teacher Council:** To facilitate employer engagement, the regulations governing Parent–Teacher Councils (PTCs) will need to be appropriately amended to accommodate the inclusion and participation of industry representatives.

2.3 Integration with National Education Policies

The strategy aligns with the National Education Policy 2024-29 and the National Skills Strategy 2024-29, which emphasise the integration of technical and vocational education at all levels and call for schools to select NVQF qualifications that align with local economic opportunities. The policies mandate that schools without technical facilities may attach to a nearby TVET institute. Through this strategy, all participating schools will either establish on-site workshops or partner with accredited TVET institutes to deliver practical training. The National Education Policy also calls for expansion of Middle Tech and Inter-Tech streams; the proposed orientation phase in grade VIII will ensure coherence with Middle Tech and create a pipeline into Inter-Tech.

3 Labour-Market Analysis

3.1 Demographic Context

Pakistan's population stands at 241.5 million, with 26 per cent aged between 15 and 29 and 53.8 per cent within the working-age group (15–59). Khyber Pakhtunkhwa mirrors this youth-heavy demographic, and its labour force is expected to expand rapidly over the next decade. Harnessing this demographic dividend requires equipping youth with employable skills and ensuring pathways into decent work. Failure to do so risks exacerbating unemployment, underemployment and social unrest.

3.2 Local Labour-Market Demand

The provincial economy is characterised by agriculture, construction, transport, small-scale manufacturing and emerging services sectors. However, productivity remains low and the adoption of digital and green technologies is limited. Key observations from recent labour-market analyses include:

- **Skilled workers supply and demand disparity:** The existing formal TVET manage to supply around 40,000 against annual demand of 125,000 even selected sector.
- **Skill mismatch and low productivity:** National surveys reveal a mismatch between workforce skills and market demands, with unskilled migration dominating overseas labour flows. High reliance on unskilled labour limits earnings potential and reduces competitiveness.
- **Construction and infrastructure.** Large-scale infrastructure projects (roads, hydropower and urban development) require electricians, plumbers, masons, welders and equipment operators. However, the supply of certified technicians is inadequate, leading to high reliance on informal workers.
- **Agribusiness and value addition.** KP's agricultural sector offers potential for agro-processing, cold storage, packaging and logistics. Technical skills in refrigeration, food safety, and digital supply-chain management are in demand.
- **Green and renewable industries.** Climate adaptation and renewable energy projects (solar, micro-hydro, energy-efficient construction) create demand for technicians in solar installation, energy auditing and waste management. The transition to a green economy is expected to generate millions of jobs globally including in the local

economy, but female workers risk benefiting 30–46 percentage points less than men due to limited access to STEM education.

3.3 Overseas and Gulf Labour-Market Demand

Remittances are a major source of foreign exchange; more than 14.22 million Pakistanis have worked abroad since 1972. In 2024, the Bureau of Emigration and Overseas Employment registered 727,381 workers for overseas employment, with 62 per cent heading to Saudi Arabia and significant numbers to Oman, the United Arab Emirates, Qatar and Bahrain. However, 50 per cent of registered workers are unskilled and 35 per cent were classified as skilled. Provincial disparities show that Punjab and KP dominate overseas employment, but Balochistan and Gilgit-Baltistan are underrepresented due to high migration costs and inadequate training infrastructure.

Gulf economies are diversifying beyond oil, creating demand for technicians in construction, logistics, healthcare, hospitality, ICT and renewable energy. Over 96 per cent of Pakistani migrant workers are employed in Gulf Cooperation Council countries, yet employers increasingly require formal certification and proof of competency. The Matric-Tech programme must therefore align with international standards and provide pathways to Level 3 and Level 4 certificates recognised by overseas employers and digitally accessible from any corner of the world. Linking with NAVTTC's recognition of prior learning (RPL) processes can also help experienced workers obtain certification for migration.

3.4 Gig Economy and Freelancing Opportunities

Pakistan is ranked among the top four countries for freelance labour supply. The growth of the digital economy offers flexibility, higher earnings and global market access, but only when workers possess relevant digital skills and have reliable internet connectivity. A recent study notes that 2.9 per cent of people are engaged full-time with the gig economy and 10.6 per cent use it as a second job. 32 per cent of gig workers are highly educated and 75 per cent are under 35 years. The average income of gig workers is PKR 58,000 per month, and high participation by university graduates has helped reduce unemployment among degree holders. However, digital skill gaps are significant: only 3 per cent of individuals have advanced digital skills. Moreover, inadequate internet infrastructure in remote districts of KP limits access to online work. To capture these opportunities, Matric-Tech must embed digital competencies, entrepreneurship and platform-based work readiness.

4 International Comparative Review and Lessons

4.1 Germany and Switzerland: Dual Systems

Germany's dual vocational training system combines theory and practice through structured cooperation between private companies and public vocational schools. The system is underpinned by more than 350 officially recognised occupational standards co-developed by industry and the state. Private companies voluntarily train apprentices and bear around two-thirds of training costs. Students spend part of the week at vocational school and the remainder at the workplace, allowing them to acquire both theoretical knowledge and practical skills. This system leads to high employment rates and ensures that training aligns with labour-market demand. The system also provides clear progression pathways: graduates can

advance through additional qualifications (Fachhochschulreife or vocational baccalaureate) to higher education.

Switzerland operates a similar dual system in which around two-thirds of students choose upper-secondary VET programmes. Apprenticeships are mandatory and employers are deeply involved in curriculum design, assessment and certification. Graduates receive nationally recognised occupational qualifications and often obtain employment with respective training companies. Both Germany and Switzerland emphasise early career orientation (typically in grades 8–10) through career counselling, practical workshops and short internships, ensuring that learners make informed choices before entering formal apprenticeships.

Lessons for KP:

- **Employer-led standards and financing:** The success of the dual system is rooted in employer ownership of training standards and substantial financial contributions. KP must develop mechanisms for industry associations to co-design and ideally co-finance training through cost-sharing schemes.
- **Structured apprenticeships:** Apprenticeships must be legally recognised, with clear obligations for employers, schools and learners. Workplace learning should be scheduled and supervised, with assessment criteria jointly agreed between industry and education authorities.
- **Flexible progression:** Dual systems allow progression to higher levels of VET as well as to general education. Matric-Tech should similarly provide credit accumulation and transfer to DAE/Level and tertiary pathways, ensuring that vocational routes are not dead-end.

4.1.1 4.2 Australia: VET in Schools

Australia's VET-in-Schools (VETiS) programme enables secondary students to undertake nationally recognised training while completing their senior secondary certificate. In 2024, participation in VETiS rose by 5.8 per cent, reaching 266,765 students about 27.8 per cent of the 15–19-year-old population. Females now constitute 46.9 per cent of enrolments, and participation by Indigenous students, students with disabilities and those in regional and remote areas has grown. Approximately 8.1 per cent of VETiS students undertake school-based apprenticeships, while enrolments have shifted toward Certificate III and higher qualifications.

Lessons for KP:

- **Inclusive participation:** VETiS demonstrates that targeted outreach and flexible delivery can increase participation of female students, indigenous communities and learners with disabilities. KP should design inclusive admissions policies and provide scholarships or stipends for under-represented groups.
- **School-based apprenticeships:** Combining school study with workplace learning is feasible within the secondary timetable. KP can adapt this model by embedding OJT within the school calendar (during the long holidays), allowing students to accumulate on-the-job hours without disrupting academic progression.

- **Higher-level qualifications:** Encouraging students to pursue higher-level certificates (Level III and above) enhances employability. Matric-Tech should aim to deliver Level 2 and Level 3 in grades 9 and level 4 in grade 10 thus facilitating progression to DAE/Level 5.

4.2 United Kingdom: V Levels and T Levels

The United Kingdom is undertaking major reforms to streamline post-16 vocational education. From 2027, new (**V Levels**) A-Level-equivalent technical qualifications will be offered in areas such as education, finance and digital, designed around real jobs and employer needs. These qualifications will sit alongside A Levels and T Levels, allowing students to mix academic and vocational subjects. New foundation and occupational pathways will provide a year of study or a two-year employment-focused programme for lower-attaining students. Public consultations show strong parental support for a mix of academic and technical training.

Lessons for KP:

- **Clear pathways and branding:** The UK reform emphasises clear branding (V Levels, T Levels) and public awareness to reduce stigma and confusion. KP should similarly communicate the value of Matric-Tech stream to students, parents and employers, highlighting that these qualifications are equivalent to mainstream academic certificates.
- **Foundation and occupational routes:** Providing preparatory programmes for students who need additional support before entering technical streams can improve equity. KP can introduce a foundation year (grade VIII) focused on career orientation.
- **Parental engagement:** Public awareness campaigns and counselling services should involve parents, who influence students' educational choices. Surveys show that parents value mixed academic and vocational pathways; this sentiment can be harnessed to increase enrolment in Matric-Tech.

4.3 Malaysia: Integrated TVET Policies

Malaysia has pursued an integrated approach to TVET, achieving significant cultural and structural shifts. In 2024, 53.56 per cent of secondary school leavers selected TVET as their first choice, amounting to 212,000 new admissions. Graduate employability has risen to 95.1 per cent. Reforms included consolidating fragmented governance across 12 ministries under a unified National TVET Council and launching the National TVET Policy 2030. TVET certification now extends to Levels 6–8 of the Malaysian Qualifications Framework, and an Articulation Programme allows certificate holders to pursue advanced degree courses. TVET is embedded within strategic industrial zones to align training with local demand and to support 700,000 manufacturing and 500,000 digital-economy jobs under the 13th Malaysia Plan. Further, Budget 2025 increased TVET funding to RM 7.5 billion, allocated RM 1.2 billion for vocational colleges serving 77,000 students and introduced tax incentives for companies donating equipment to skills institutions.

Lessons for KP:

- **Unified governance:** Consolidating TVET governance under a single council, improved coherence and strategic direction. KP should establish a Matric-Tech

Steering Committee with representatives from E&SED, KP-TEVTA, NAVTTC, BISE, TVET expert, industry and donors.

- **Industry integration:** Embedding training within industrial zones ensures that programmes meet real labour-market demand. KP should locate pilot schools and training centres near industrial clusters such as the Rashakai Special Economic Zone and the Hattar Industrial Estate and integrate training with enterprises operating there.
- **Higher-level articulation:** Malaysia's articulation programme shows that vocational learners can progress to higher education if pathways are clear. KP should ensure that Matric-Tech graduates can pursue DAE/Level 5 and then enter universities.
- **Financial incentives:** Tax deductions and grants for industry participation and equipment donations encourage private sector engagement. KP should explore similar incentives within its fiscal framework.

4.4 Cross-cutting Lessons from Global Evidence

Across OECD countries, well-designed TVET systems engage students, facilitate school-to-work transitions and provide opportunities for lifelong learning. TVET systems must adapt to mega-trends such as automation, digitalisation and the green transition, and should be responsive, flexible and innovative. Evidence shows that dual apprenticeship models are more effective than purely school-based VET in reducing youth joblessness. Aligning education more closely with specific vocations helps reduce skill mismatches and unemployment. These insights guide the design of the restructured Matric-Tech programme.

5 Vision, Objectives and Guiding Principles

5.1 Vision

To develop a labour-market responsive, inclusive and internationally recognised secondary vocational education system that empowers youth in Khyber Pakhtunkhwa to pursue gainful employment, entrepreneurship and further education, while contributing to sustainable economic growth and social development.

5.1.1 5.2 General Objectives

1. **Enhance employability:** Ensure that at least 50 per cent of Matric-Tech graduates secure employment or self-employment within six months of graduation in trade-relevant occupations.
2. **Improve vertical progression:** Achieve at least 40 per cent of graduates progressing to DAE/Level 5 and 10 per cent entering higher education.
3. **Strengthen industry engagement:** Establish formal partnerships with 5 employers/school offering matric tech and at provincial level with at least 200 companies, including Gulf employers and gig-economy platforms, for curriculum co-development, apprenticeships and recruitment.
4. **Promote gender and social inclusion:** Achieve gender parity in enrolment by 2030 and ensure that at least 20 per cent of enrolments come from rural and marginalised districts.

5. **Embed digital and green skills:** Integrate digital literacy, coding, digital marketing, entrepreneurship and green technology modules across all trades, enabling graduates to access gig-economy and green-jobs opportunities.

5.2 Guiding Principles

1. **Competency-based learning:** Curriculum and assessment will focus on demonstrable competencies rather than rote knowledge. Learning outcomes will be aligned with NVQF level descriptors and industry standards.
2. **Industry partnership:** Ensure to adapt national skill standards developed in the respective employers. Employers are onboard to assess competencies and participate in certification. Private sector contributions (equipment, trainer time, financing) will be incentivised through recognition awards.
3. **Inclusivity and equity:** The programme will proactively reach out to girls, rural youth, people with disabilities and marginalised communities through various targeted interventions.
4. **Flexibility and progression:** Multiple entry and exit points will allow learners to accumulate credits, recognise prior learning and progress to higher levels or into employment. The programme will support transition to DAE/Level5, higher education or entrepreneurship.
5. **Quality assurance and accountability:** Robust monitoring and evaluation mechanisms including tracer studies, employer feedback and academic and quality audits will inform continuous improvement. Results will be publicly reported to ensure accountability.
6. **Institutional strengthening:** The E&SED will establish a dedicated section/wing with TVET expert in the lead.

6 Proposed Matric-Tech Model and Implementation Design

6.1 Programme Structure

The proposed model restructures the Matric-Tech programme into a three-stage pathway, aligned with NVQF levels and incorporating an orientation phase. The stages are summarised in **Table 1** and detailed below.

6.1.1 Table 1 – Proposed Matric-Tech programme structure (summary)

Stage	Grade & NVQF Level	Duration	Key Components	Certification
Career Orientation	Grade VIII (Middle Tech)	2 weeks only	Career guidance, introductory technical modules, practical workshops, digital literacy, soft skills in schools offering matric tech	Record of achievements issue by the respective school
Level 2 (Semi-Skilled)	Grade IX (Matric-Tech)	Six Months	Technical core modules, cross-curricular academic subjects, digital and green skills	BISE Grade IX Certificate + NVQF Level 2 Certificate

Stage	Grade & NVQF Level	Duration	Key Components	Certification
Level 3 (Skilled)	Grade IX (Matric-Tech)	Six Months	Advanced technical modules, entrepreneurship and gig-economy modules, credit accumulation	NVQF Level 3 Certificate
Level 4 (Expert)	Grade X (Matric-Tech)	1 year	Advanced technical modules, entrepreneurship and gig-economy modules, credit accumulation	Technical School Certificate (TSC) + NVQF Level 4 Certificate

- 1- Career Orientation Phase (Grade VIII).** A structured two-week orientation programme will be implemented for Grade 8 students studying in Matric-Tech schools, focusing on career awareness and pathways leading to employment and entrepreneurship.
- 2- Level 2 and 3 (Grade IX):** In the first half of the academic year, learners will be trained at NVQF Level 2, followed by progression to Level 3 in the second half. The summative assessment will be conducted through an integrated examination system comprising two halves, designed to evaluate the competencies acquired at each level. At Level 2, modules will consist of both foundational and occupational skills to build a strong base for further specialization. In the last year, the learner will be exposed to level 3 learning.
- 3-** Technical subjects will constitute at least 40% of the total instructional time, addressing the existing imbalance where academic content dominates. Each trade will be delivered through a competency-based curriculum aligned with NVQF Levels descriptors, encompassing knowledge, practical skills, and professional attitudes. Assessment will include continuous formative evaluation for each module and a comprehensive summative assessment upon completion. Successful candidates will be awarded the BISE Grade IX certificate/DMC along with National Vocational Certificates at Level 2 and Level 3 in the respective trade. In case of early exit, learners will receive a Record of Achievement for the modules in which they have demonstrated competence through internal assessment. Additionally, the external candidates as well as dropped outs will have the opportunity to appear in annual assessments along with regular learners for assessment through the Recognition of Prior Learning (RPL) mechanism.
- 4- Level 4 (Grade X).** Level 4 builds advanced competencies and prepares learners for employment or progression to DAE/Level 5. Technical modules will deepen skills and introduce problem-solving, innovative tasks and supervisory skills. Students should ideally undertake 60 days of OJT and participate in an entrepreneurship module focusing on business planning, financial literacy, marketing and digital freelancing. On completion, students will receive the TSC (Matric-Tech) recognised by BISE and the National Vocational Certificate Level 4. Credits earned can be transferred toward DAE/Level 5.

6.2 Trade Selection

Trades offered should meet local economic demand, Gulf labour-market requirements and gig-economy opportunities. An initial market assessment of each district will identify high-demand trades, such as (example only):

1. **Construction and infrastructure:** Electrical installation, plumbing, civil draughtsmanship, welding, HVAC (heating, ventilation and air conditioning), and solar installation.
2. **Manufacturing and fabrication:** Automotive mechanics, mechatronics, machining, welding and industrial maintenance.
3. **Agro-processing and food technologies:** Food processing, refrigeration, dairy technology, horticulture and packaging.
4. **Hospitality and services:** Culinary arts, hotel management, tourism services, caregiving, childcare and logistics.
5. **Information and communication technology (ICT):** Computer hardware support, digital marketing, web development, graphic design, data analysis and e-commerce operations. The integration of digital literacy is critical given the gig-economy opportunities. **Green technologies:** Solar PV installation, waste management, energy auditing and water resource management. These trades leverage global green jobs growth.

6.3 Curriculum Development Process:

1. **Competency standards development.** The existing skill standards should be considered for curricula development. Where standards are not available, the DC&T and E&SED will collaborate with KP-TEVTA, NAVTTC and industry associations to develop competency standards. Qualification Development Committees (QDCs) will include employers, trade associations and educators, ensuring that standards reflect current technologies and practices.
2. **Curriculum and training packages.** Based on standards, curricula will be designed following competency-based training and assessment (CBT&A) methodology. Each module will specify learning outcomes, performance criteria, assessment conditions and notional hours. Cross-cutting modules on digital literacy, environmental sustainability, occupational safety and health and entrepreneurship will be integrated across trades.
3. **Credit assignment.** Credits will be assigned according to NVQF guidelines on notional learning hours and credit values. Under the NVQF structure, Level 2 requires a minimum of 20 credits and prepares learners at a semi-skilled level, while Level 3 requires 30 additional credits (cumulative 70) and transitions learners to skilled status. Level 4 further requires 40 credits (cumulative 110), leading to a highly skilled occupational level. These qualifications are awarded by accredited Qualification Awarding Bodies (QABs), ensuring standardisation and national recognition. In terms of learning volume, each credit typically corresponds to approximately 10 notional hours, implying that Level 2 involves around 200 hours, Level 3 around 300 hours,

and Level 4 approximately 400 hours of structured learning, combining theory, practical training, and assessment.

4. **Language and inclusivity:** Instructional materials will be developed in both English and Urdu, with supplementary Pashto support for technical terminology to enhance comprehension at the local level. The curriculum will be gender-responsive, incorporating content that challenges traditional stereotypes and actively promotes female participation in non-traditional trades. Furthermore, the curriculum will be designed in line with the **5Rs principles of green skills** i.e. Reduce, Reuse, Recycle, Recover, and Redesign to ensure alignment with environmental sustainability and climate-responsive practices.
5. **Use digital tool for development:** The development of occupational standards, curricula, assessment packages, and teaching–learning materials must systematically leverage digital tools and platforms to enhance efficiency, consistency, and quality assurance. The use of digital authoring systems, and collaborative content development platforms will enable faster turnaround times, cost optimization, and real-time coordination among stakeholders. Additionally, digitalization supports standardization, version control, and continuous improvement through feedback loops, while ensuring alignment with national frameworks and facilitating scalable, high-quality implementation.

6.4 Assessment and Certification

Assessment will be competency-based and comprise three components:

1. **Hybrid Assessment/Examination:** The department/QAB should adopt a hybrid assessment framework that integrates competency-based assessment with the existing marks-based system to ensure both academic equivalence and skills credibility. Under this approach, all technical subjects shall be assessed through clearly defined competency standards aligned with NVQF, where performance criteria, practical skills, knowledge, and workplace attitudes are evaluated using structured rubrics and assigned proportional weightage. Marks shall be derived from demonstrated competencies rather than theoretical recall, with a mandatory minimum competency threshold for critical skills to ensure quality assurance. The system should incorporate modular assessment, combine formative and summative evaluations, and produce dual outcomes, i.e. numerical marks for board certification and competency status for skills recognition. This integrated model will enable standardization, transparency, and alignment with labour market requirements while maintaining compatibility with the existing examination system
2. **Formative assessment.** Teacher(s) will conduct continuous assessment of every module through practical demonstrations, projects, assignments and observations. Students must demonstrate competence in each learning outcome before advancing.
3. **Use of Digital tool in assessment:** The department must consider the use of digital in assessment to enhance the efficiency, transparency, and reliability of competency-based evaluation. Digital platforms such as Learning Management Systems (LMS), e-portfolios, and mobile-based assessment applications enable real-time recording of learner performance, standardized rubric-based scoring, and secure evidence collection (e.g., videos, photos, logs). They support automated mark calculations, reduce human error, and ensure consistency across institutions. Additionally, digital

tools facilitate remote monitoring, third-party verification, and data-driven decision-making, thereby strengthening quality assurance and alignment with national standards.

4. **OJT assessment: (to be decided by the department).** Workplace supervisors will assess student performance during OJT using standardised checklists. Supervisors will be trained as incentive for them and will ensure consistency and reliability.
5. **Summative assessment.** At the end of each year, students will undergo summative assessment at accredited assessment centers (school to seek accreditation for the respective trade(s). Assessment packages will include written tests, practical demonstrations and oral interviews. External assessors (ideally from the market) appointed Board (QAB) will ensure impartiality.
6. Upon successful completion of each year, NAVTTC (through the relevant QAB) will issue the National Vocational Certificate for respective level(s). BISE will issue the standard academic certificate/DMC for grade IX and grade X. Dual certification will be reflected in students' transcripts to facilitate recognition by employers and higher-education institutions.

6.5 Credit Accumulation and Transfer

Credit accumulation will allow learners to progress vertically and horizontally. Credits earned in lower Level are counted in vertical levels as well in horizontal's qualification. Students who exit after Level 2 may return later to complete Level 3 or progress to Level 4 via RPL and bridging courses. A provincial Credit Accumulation and Transfer System (CATS) will be established, linked to the national CATS described in the NVQF manual. The CATS will record credits, competencies and qualifications in a digital database accessible to students, institutions and employers.

6.6 Recognition of Prior Learning

- 1- Many youth and adults already possess skills acquired through informal apprenticeship or work experience. The NVQF provides mechanisms for Recognition of Prior Learning (RPL). This strategy will establish RPL assessment centres within school offering Matric Tech to assess and certify competencies of out-of-school youth, returned migrants and informal workers. RPL will provide direct entry to Level 2 or Level 3 and open progression pathways. Awareness campaigns will encourage informal workers to seek certification to enhance employability and access overseas jobs.
- 2- Recognition of Prior Learning (RPL) can serve as a powerful instrument for improving literacy rates by integrating a mandatory foundational crash course in reading, writing, and basic numeracy aligned with nationally defined literacy standards. This ensures that individuals seeking certification not only validate existing skills but also attain minimum functional literacy. To enhance accessibility and scalability, these learning materials should be digitized and made available through online platforms and mobile applications, enabling self-paced learning for a wider population, including out-of-school youth and adults. Such an approach strengthens inclusion, promotes lifelong learning, and links skills recognition with essential literacy outcomes.

7 Governance and Institutional Framework

7.1 Matric-Tech Steering Committee

To ensure coherence and accountability, a high-level Matric-Tech Steering Committee (MTSC) will be established under the chairmanship of the Minister for Elementary & Secondary Education (**Secretary E&SED to decide**). The MTSC will include representatives from E&SED, KP-TEVTA, KP-BT&CE, NAVTTC, BISE, KP Planning & Development Department, Finance Department, the Directorate of Science & Technology, leading industry associations (e.g., Chambers of Commerce, construction associations, IT associations), and development partners (World Bank, GIZ, ILO, ADB). The MTSC's roles include:

- Approving policy frameworks, levels/curricula, trade selections and accreditation criteria.
- Mobilising financial resources and coordinating donor support.
- Ensuring alignment with national policies and NAVTTC requirements.
- Overseeing monitoring and evaluation and ensuring that recommendations are implemented.

7.2 Matric Tech Wing/Section:

The Department of Elementary and Secondary Education should strategically strengthen its institutional capacity in TVET by establishing a dedicated wing or a fully functional unit led by an experienced TVET reform specialist. This unit should be mandated to lead, plan, coordinate, and steer the design and implementation of the Matric-Tech programme, ensuring alignment with NVQF standards, labour market demands, and international best practices. It should also oversee curriculum integration, industry linkages, teacher capacity building, and monitoring systems, thereby institutionalising TVET within the school education framework and ensuring sustained, high-quality programme delivery. The Matric Tech Wing will serve as secretariate to MTSC.

7.3 Technical Working Groups

The MTSC will establish Technical Working Groups (TWGs) for curriculum development, industry partnerships, teacher training, finance and M&E. Each TWG will comprise specialists from relevant departments, industry experts and donor representatives. TWGs will develop detailed implementation plans, draft regulations and provide technical inputs to the MTSC.

7.4 Institutional Roles and Responsibilities

1. **Elementary & Secondary Education Department (E&SED):** Lead agency responsible for policy, budgeting, school selection, instructors/teachers' recruitment and overall coordination. Ensure integration of Matric-Tech into provincial education planning and budgeting processes.
2. **KP-TEVTA:** Technical Education and Vocational Training Authority Khyber Pakhtunkhwa is responsible for the training of master trainers in the respective trades, as well as for building their technical capacity to effectively implement competency-based training methodologies. This includes equipping trainers with industry-relevant skills, andragogical techniques, and assessment practices aligned with NVQF

standards, ensuring that training delivery is practical, standardized, and responsive to labour market requirements.

3. **NAVTTC:** Provide competency standards and curricula, register qualifications, provide textbook in soft that are available.
4. **Qualification Awarding Bodies (QABs):** Accredite assessment centres (Schools) and issue vocational certifications, while providing technical guidance on credit allocation and the implementation of Recognition of Prior Learning (RPL). This support should continue until the Board of Intermediate and Secondary Education (BISE) obtains accreditation from the National Vocational and Technical Training Commission and develops sufficient in-house capacity to independently manage and steer the Matric-Tech programme
5. **Board of Intermediate and Secondary Education (BISE):** Revise examination and promotion regulations to integrate competency-based assessment within the existing marks framework, certify the academic components, and ensure full equivalence between Matric-Tech and general education streams. In parallel, establish structured coordination with the National Vocational and Technical Training Commission to enable dual certification, ensuring that learners receive both board-recognized academic credentials and NVQF-aligned vocational certification, while gradually building in-house capacity for independent implementation.
6. **Industry Associations and Employers:** Participate in QDCs, provide apprenticeship placements, co-finance programmes, donate equipment, assess students, recruit graduates and provide feedback. Large employers in construction, manufacturing, agribusiness, hospitality, ICT and green technology will be engaged through Memoranda of Understanding (MoUs).
7. **Donor Agencies:** Provide technical assistance, funding, capacity building, and international linkages. Support pilot evaluations, digital MIS development and quality assurance systems.

8 Teacher Training, Capacity Development and Infrastructure

8.1 Teacher Recruitment and Training

The success of competency-based, industry-driven training is fundamentally dependent on the availability of qualified instructors with both technical and andragogical competence. At present, only IT teachers are available in high and higher secondary schools and many school-based IT teachers lack up-to-date industry skills, while TVET instructors often have limited exposure to effective teaching and learning methodologies. For other trades, teacher are not available at all. Therefore, hiring services of teachers is imperative. However, expanding the permanent teaching cadre is neither efficient nor sustainable. Instead, the system should adopt a flexible, results-oriented approach by engaging highly skilled industry professionals on an assignment basis. This model shifts the focus from resource-based deployment to performance-based delivery, ensuring relevance, efficiency, and alignment with labour market needs. Accordingly, the strategy recommends:

1. **Qualified instructors:** Hire the services of highly skilled workers who possess strong vocational competence, preferably at NVQF Level 4 and are actively engaged in the

local labour market within their respective trades. Where such candidates lack formal teaching experience, provide structured, online teacher training leading to a recognised teaching qualification, followed by competency-based assessment. In parallel, engaged TEVTA and other relevant stakeholders to deliver targeted andragogical training, ensuring that instructors are equipped with effective, learner-centred teaching methodologies alongside their technical expertise.

2. **Capacity-building programmes:** Develop a comprehensive training plan for current and new instructors. Training will cover competency-based training and assessment methods, use of digital tools, gender-sensitive andragogy, career counselling and entrepreneurship education.
3. **Industry attachment:** Teachers should undergo regular industrial attachments (e.g., 2–4 weeks annually) to remain up-to-date with industry practices. Industry partners will host and co-fund these attachments.
4. **Instructor certification:** NAVTTC, through its master-trainer programmes, will certify instructors who successfully complete training. Certification will be linked to career progression and salary incentives.

8.2 Infrastructure and Equipment

1. **School workshops:** Schools participating in Matric-Tech must establish or upgrade workshops/labs to meet NVQF equipment standards. They will be categorised into three tiers: fully equipped schools, partially equipped schools and attached schools. Partially equipped schools will be partnered with nearby TVET institutes/schools for specialised training.
2. **Equipment procurement and maintenance:** Although lists of tools and equipment are typically annexed to each competency-based curriculum, a Technical Working Group should be constituted to validate and regularly update standardized equipment lists for each trade to ensure alignment with current industry practices. For maintenance and sustainability, the Elementary and Secondary Education Department should institutionalize the **5S model** (Sort, Set in order, Shine, Standardize, Sustain) to ensure proper utilization, upkeep, and longevity of equipment. In addition, structured engagement with industry should be promoted, including incentivizing equipment donations through appropriate fiscal or tax facilitation measures to strengthen resource availability and relevance.
3. **Digital infrastructure:** All participating schools will receive broadband connectivity, updated computer labs and digital learning platforms. E-learning modules will supplement face-to-face instruction, enabling blended learning. Digital resources will support gig-economy modules and online entrepreneurship.
4. **Green upgrades:** Energy-efficient lighting, solar panels and water-saving devices will be installed in workshops, both to reduce operational costs and to model green practices for students.

8.3 Supporting Services

1. **Career guidance centres:** Each school will establish a career guidance cell staffed by trained counsellors ideally tasked the existing staff. These centres will provide labour-market information, counsel students on trade selection, assist with job search and facilitate apprenticeships.

2. **Student support services:** Provision of stipends for low-income students, hostel facilities for those from remote areas, transportation support (e.g., bicycles or bus passes) and childcare support where needed. Gender-sensitive facilities (e.g., separate restrooms, secure accommodations) will be prioritised.
3. **Industry liaison units:** One of the key rationales for engaging skilled workers from the local market as instructors is to facilitate the development of strong industry linkages, particularly for student placement and employment pathways. In addition, schools should establish formal coordination with the Career Counselling and Job Placement (CC&JP) units of Technical Education and Vocational Training Authority Khyber Pakhtunkhwa to seek technical guidance, access employer networks, and strengthen placement support mechanisms.

9 Industry Engagement and Labour-Market Linkages

9.1.1 Partnership Models

Effective industry engagement is central to any TVET model. This strategy proposes multiple partnership models:

1. **Apprenticeship agreements:** Employers enter into apprenticeship contracts with students for the OJT portion of the programme. Contracts specify training duration, learning outcomes, supervision, stipends and insurance. Employers commit to providing quality training and may receive tax deductions or wage subsidies.
2. **Training consortia:** Small and medium-sized enterprises (SMEs) may form consortia to pool resources for training. KP-TEVTA will facilitate shared workshops and joint apprenticeship programmes for SMEs that cannot host apprentices individually.
3. **Partnerships OEPs and OEC:** Engage with Overseas Employment Promoters as well as with Overseas Employment Corporation (OEC) to identify skill requirements, obtain curriculum input and secure job placements.
4. **Gig-platform partnerships:** Collaborate with digital platforms (e.g., Upwork, Fiverr, Daraz, Bykea) to design modules on online work, facilitate internships and connect graduates to gigs. Partnerships may also provide certification or badges for digital work readiness.

9.2 Incentives for Employers

To encourage employer participation, the strategy proposes:

- **Recognition programmes:** Annual awards for “Best Company” and public recognition at provincial ceremonies. Publication of success stories in media can enhance corporate reputation.
- **Cost-sharing and wage subsidies:** Provide partial reimbursement of apprentice stipends, particularly for SMEs, through donor-funded schemes.
- **Mandatory Industry Placement Compliance Framework:** Make it mandatory for all companies and contractors to accommodate E&SED students for placements as a precondition for engagement with the Department. Only those entities that comply with this requirement should be eligible to undertake work with E&SED. The Matric Tech

Steering Committee will develop and approve a transparent allocation formula to determine the number of students each company or contractor must accommodate, ensuring fairness, scalability, and alignment with industry capacity.

9.3 Labour-Market Information Systems (LMIS)

E&SED, in collaboration with KP-TEVTA and the provincial Labour Department, will establish a provincial LMIS. The system will integrate data from labour demand surveys, tracer studies, migration statistics, gig-platform usage and industry forecasts. This information will inform trade selection, curriculum updates and career counselling. The LMIS will be linked to NAVTTC's national system and accessible to students, parents and employers through a mobile app.

9.4 Tracer Studies and Employer Feedback

Regular tracer studies will track graduate employment, earnings, job satisfaction and progression. Employer surveys will collect feedback on graduate performance and training relevance. These data will feed into curriculum review cycles, teacher training and policy adjustments.

10 Financing and Resource Mobilisation

10.1 Budgetary Requirements

Implementation of the restructured Matric-Tech programme is proposed in a phased manner, focusing on two broad streams: (i) digital and entrepreneurship domains (IT and Entrepreneurship), and (ii) core vocational trades such as Renewable Energy and other industry-linked sectors. The first cohort will be launched in 72 proposed Centres of Excellence (CoEs) during 2026–27, initially focusing on IT trades. This will be followed in the year 2027-28 by the expansion of the same cohort to an additional 500 schools, alongside the introduction of Entrepreneurship training across all 572 institutions. In the subsequent phase (2028–29), the programme will be further scaled to an additional 1,500 schools. Core vocational trades will initially be piloted in the 72 CoEs, aligned with local labour market demand, and gradually expanded based on lessons learned and system readiness. Preliminary cost estimates (illustrative) are proposed to guide planning and resource mobilization.

Cost Head	2026-27	2027-28	2028-2029	Total (Million)
	Pilot 72 CoEs	Additional 500 Schools	Additional 1500 Schools	
Matric-Tech Wing/Institutional Setup	30.00	30.0	30.0	90.0
System + Curriculum & Content Development	10.00	10.0	10.0	30.0
System + Teacher/Trainer Capacity Building	20.00	30.0	30.0	80.0

IT Infrastructure Strengthening for IT Trades @ 2 m/school	144.00	1,000.0	3,000.0	4,144.0
Industry Experts (Assignment Based Instructors) @ 0.5 m/school		286.0	1,036.0	1,322.0
Tools, Equipment & Maintenance (5S Model)	1.44	11.4	41.4	54.3
Consumable for practical	3.60	28.6	28.6	60.8
Digital Infrastructure (LMS, Content, Devices) (already exist)	-			-
Student Support - Transition to Labour Market	7.20	57.2	207.2	271.6
Monitoring, Evaluation & QA Systems	10.00	20.0	30.0	60.0
Communication & Outreach	10.00	10.0	10.0	30.0
Total	236.24	1,483.2	4,423.2	6,142.7

Matric Tech with Hardcore Vocational Subjects

Cost Head	2026-27	2026-27	2028-2029	Total (Million)
		Pilot 72 CoEs	Additional 500 Schools	
Matric-Tech Wing/Institutional Setup	-	-	-	-
System + Curriculum & Content Development		10.0	10.0	20.0
System + Teacher/Trainer Capacity Building		30.0	30.0	60.0
Tools, Equipment & Maintenance and Furniture & Fixture @ 10 m/school		720.0	5,720.0	6,440.0
Industry Experts (Assignment Based Instructors) @ 0.5 m/school		36.0	1,036.0	1,072.0
Tools, Equipment & Maintenance (5S Model)		1.4	41.4	42.9
Consumable for practical		7.2	7.2	14.4
Digital Infrastructure (LMS, Content, Devices) (already exist)				-
Student Support - Transition to Labour Market		7.2	207.2	214.4

Monitoring, Evaluation & QA Systems				-
Communication & Outreach				-
Construction of Training Hall Cum Production +Service Unit		345.6	2,745.6	3,091.2
Total		1,157.4	9,797.4	10,954.9

Grand Total	236.2	2,640.7	14,220.7	17,097.6
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10.2 Funding Source

1. **Provincial budget allocations:** E&SED will prioritise the Matric-Tech programme within its annual budgeting framework under the Government's Good Governance Programme. For the pilot phase (2026–27), the reform will be financed through internal savings generated from the rationalisation of underperforming programmes, ensuring efficient resource reallocation without immediate fiscal burden. From 2027 onwards, as the programme scales, the Department will formally seek additional funding through provincial budgetary allocations and development partners to support expansion, system strengthening, and sustainability of the initiative.
2. **Donor support:** Development partners such as the World Bank, GIZ, International Labour Organization, and Asian Development Bank represent key sources of concessional financing and technical assistance. The strategy will be packaged for donor engagement, clearly demonstrating alignment with global best practices and relevant Sustainable Development Goals such as SDG 4 (Quality Education) and SDG 8 (Decent Work), SDG 5 by promoting women's participation in non-traditional trades and removing barriers to economic inclusion, SDG 12 and SDG 13 for equipping learners with competencies relevant to a low-carbon, resource-efficient economy, including renewable energy, sustainable agriculture, and waste management.
3. **Industry contributions:** Employers will contribute through training placements, equipment donations, trainer time and direct funding. Tax incentives will be introduced to encourage contributions.
4. **Public-private partnerships (PPPs):** PPP models may be used for constructing workshops, operating training centres or delivering digital learning platforms.
5. **Cost recovery:** Nominal fees may be charged for RPL assessments and evening courses, with exemptions for disadvantaged students.
6. **Production Cum Services:** Workshops and labs may be operationalised as Production-cum-Service Units, serving a dual purpose: (i) providing learners with hands-on, real-world exposure to strengthen competency development through live projects and service delivery, and (ii) generating a sustainable revenue stream for schools.

10.3 Financial Management and Accountability

Funds will be managed through a dedicated **Matric-Tech Fund** under E&SED, with robust financial governance mechanisms to ensure transparency, efficiency, and accountability. Independent audits and periodic financial reviews will be conducted, and annual financial reports will be submitted to the Matric-Tech Steering Committee (MTSC) and the Provincial Assembly. Donor resources will be administered in accordance with agreed financing arrangements, with clear documentation of co-financing contributions. At the school level, funds allocated for consumables, repair and maintenance, and the engagement of short-term technical experts will be managed through PTC/IMC structures to ensure timely utilisation, local ownership, and effective resource management.

11 Quality Assurance and Monitoring and Evaluation

11.1 Accreditation of Schools and Programmes

All schools delivering Matric-Tech will be subject to accreditation by the National Vocational and Technical Training Commission and must achieve at least a **B-category accreditation** as a minimum standard. Schools that do not initially meet the required benchmarks will be provided with targeted technical and capacity-building support to improve compliance. However, in cases of persistent non-compliance, accreditation may be suspended to ensure quality assurance and uphold programme standards. In addition, high-performing schools will be encouraged to progressively pursue international accreditation to align with global skills standards, enhance credibility, and improve the international mobility of graduates.

11.2 Assessment and Certification Quality

Schools will be subject to regular academic audits and moderation to ensure consistency, quality, and compliance with established standards. External verifiers will annually review a representative sample of assessments to validate the integrity and reliability of evaluation practices. A formal grading appeals mechanism will be instituted to safeguard fairness, transparency, and due process for learners. Additionally, competency-based assessment instruments will be standardised across institutions and periodically reviewed and updated to remain aligned with evolving industry standards and national qualification frameworks.

11.3 Monitoring and Evaluation Framework

A comprehensive M&E framework will track input, processes, output and outcomes. Key indicators will include enrolment rates (by sex and district), completion and dropout rates, pass rates for NVQF examinations, **OJT completion rates**, employment and earnings, employer satisfaction, and progression into higher education. Data will be disaggregated by gender, socio-economic status, and rural/urban location. Real-time monitoring dashboards will provide alerts to school administrators and policymakers.

An independent evaluation will be commissioned after the pilot phase to assess effectiveness and inform scaling. Donor partners will support baseline and end-line surveys, cost-benefit analyses and impact assessments. Evaluation findings will be disseminated to stakeholders and inform adjustments.

12 Gender and Social Inclusion Strategy

13 Gender Equity

Women remain underrepresented in the labour force and are particularly excluded from technical trades. To achieve gender parity in Matric-Tech enrolment, the following measures will be implemented:

- **Targeted outreach:** Conduct information campaigns in girls' schools, engage parents and community leaders, and highlight success stories of female technicians and entrepreneurs.
- **Stipends and scholarships:** Provide targeted financial incentives for female students, including stipends, hostel accommodations, transportation allowances and childcare facilities.
- **Safe learning environments:** Ensure that workshops and dormitories are safe and gender-friendly, with separate facilities where necessary. Train teachers and supervisors in gender-sensitive pedagogy and prevention of harassment.
- **Female mentors:** Engage female professionals from industry and the gig economy to serve as mentors, guest instructors and role models. Establish women's chapters within sector skills councils.
- **Gender-responsive curriculum:** Review curricula to remove gender stereotypes and to include modules on women's rights, gender equality and leadership.
- **Entrepreneurship Matric Tech:** Promoting self-employment within the Matric-Tech programme can serve as a powerful pathway for advancing gender inclusion, particularly by enabling women and girls to engage in income-generating activities from home or within their communities. By equipping female learners with market-relevant skills, entrepreneurship training, and access to micro-enterprise opportunities, the programme can help overcome mobility, cultural, and labour market barriers. Targeted support such as mentorship, access to finance, and gender-sensitive business incubation will further empower women to establish and sustain small enterprises, contributing to their economic independence and broader social inclusion.

13.1 Inclusion of Marginalised Groups

- **Rural youth and remote areas:** Expand the Matric-Tech programme to rural and mountainous districts by offering vocational subjects that are closely aligned with local economic activities, as well as universally relevant labour market domains such as IT and skills linked to overseas employment trends. This approach will enhance employability while responding to regional realities. In parallel, the use of digital platforms should be prioritised to deliver high-quality instruction through blended learning models, enabling students to access lessons both in schools and on mobile devices, thereby overcoming geographical and resource constraints.
- **People with disabilities:** Ensure physical accessibility of buildings, provide assistive devices, adapt curricula and assessment, and train instructors in inclusive andragogy.

- **Ethnic and linguistic minorities:** Offer bilingual instruction, involve local leaders in outreach and recruit instructors from diverse backgrounds.

14 Risks and Challenges

#	Risk / Challenge	Description	Mitigation Measures
1	Limited Political & Financial Commitment	Changes in government priorities may reduce funding or delay reforms.	Secure high-level political commitment through policy and legislative backing; engage Chief Minister and Provincial Assembly; formalise long-term donor agreements.
2	Resistance to Change	Teachers and school administrators may resist new curricula, assessment methods, and additional responsibilities.	Implement structured change management: orientation sessions, capacity building, continuous support, and incentive mechanisms for early adopters.
3	Insufficient Industry Participation	Employers may be reluctant to invest in training or offer apprenticeships/placements.	Introduce recognition schemes; involve employer in PTC-IMC establish SME training consortia; engage chambers of commerce and industry early in programme design.
4	Quality Dilution During Scaling	Rapid expansion may compromise quality due to limited capacity, equipment, and trained instructors.	Adopt phased scaling approach; pilot in selected districts; align expansion with investments in teacher training, infrastructure, and QA systems.
5	Gender & Inclusion Barriers	Cultural norms may restrict participation of girls and marginalised groups.	Conduct community engagement and social mobilisation campaigns; work with NGOs, media, and local leaders; promote gender-sensitive trades and safe learning environments.
6	Economic Shocks & Disruptions	External shocks (e.g., pandemics, economic downturns) may disrupt training delivery and funding.	Develop contingency plans including e-learning modules, remote assessment systems, emergency funds, and flexible budgeting mechanisms.
	Lack of TVET Expertise within the Department	Limited in-house technical expertise may hinder effective planning, implementation, and quality	Establish a dedicated Matric-Tech/TVET Wing within the department; recruit or engage TVET reform specialists; build capacity through partnerships

		assurance of the programme	with TEVTA, NAVTTC and provide continuous professional development and technical assistance.
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15 Action Plan and Implementation Timeline

The implementation of the Matric-Tech programme will follow a **sequenced, capacity-driven rollout**, beginning in the **2026–27 academic year** and expanding progressively based on system readiness, resource availability, and evaluation results.

Phase 1: Institutional Setup, Policy Alignment & Pilot Launch (2026–27)

Covering 72 Centres of Excellence (CoEs) and Focus on IT Trades only

Key Interventions:

- I. Establish a Matric-Tech Wing/Section within E&SED led by a TVET Reform Specialist
- II. Constitute the Matric-Tech Steering Committee (MTSC) and Technical Working Groups
- III. Review and amend BISE regulations to integrate competency-based assessment with marks system
- IV. Conduct labour market analysis for IT trades and future expansion sectors
- V. Adapt NVQF-aligned curricula and develop textbooks in school-compatible formats
- VI. Develop digital ecosystem (LMS, MIS, credit management system, assessment tools)
- VII. Upgrade IT labs and digital infrastructure in 72 CoEs
- VIII. Train teachers and onboard industry-based instructors (contractual model)
- IX. Establish industry MoUs for OJT, internships, and placements
- X. Launch community mobilisation campaigns (with focus on female participation)

Output:

- Fully operational pilot in 72 CoEs with IT-based Matric-Tech

Phase 2: Expansion & Diversification (2027–28)

Scaling Trades: IT + Entrepreneurship to additional 500 schools (Total: 572 schools) and piloting core TVET Trades in 72 CoEs only

Key Interventions:

- I. Expand IT trades to 500 additional schools
- II. Introduce Entrepreneurship Education across all 572 schools
- III. Pilot core vocational trades (e.g., Renewable Energy, Electrical, Mechanical) in 72 CoEs
- IV. Strengthen teacher training systems and develop master trainers

- V. Establish Recognition of Prior Learning (RPL) mechanisms
- VI. Expand industry linkages including SME consortia and overseas employment pathways
- VII. Operationalise Production-cum-Service Units in CoEs where core vocational subjects have initiated

Output:

- System expansion with diversified pathways (IT + Entrepreneurship)
- Initial integration of core TVET trades in high-capacity institutions

Phase 3: System-Wide Scaling & Consolidation (2028–29)

Covering Additional 1,500 schools added reaching to 2072 schools with range of trades

Key Interventions:

- I. Scale IT and Entrepreneurship streams to 1,500 additional schools
- II. Expand core vocational trades from CoEs to high-readiness schools
- III. Institutionalise competency-based assessment + dual certification system
- IV. Strengthen digital platforms (LMS, e-assessment, RPL systems)
- V. Integrate career counselling, job placement, and apprenticeship systems
- VI. Establish permanent LMIS (Labour Market Information System)
- VII. Embed programme funding into regular provincial budgets
- VIII. Strengthen articulation pathways (Inter-Tech, TVET diplomas, universities)
- IX. Conduct quality assurance audits and accreditation (NVQF + international benchmarking)

Output:

- Large-scale institutionalisation of Matric-Tech
- Strong linkage between education, skills, and employment

16 Rollout Plan

Key Interventions:	Resp	2026			2027				2028				2029		
		Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	Q-3	Q-4	Q-1	Q-2	
Phase 1: Institutional Setup, Policy Alignment & Pilot Launch															
Establish a Matric-Tech Wing/Section within E&SED led by a TVET Reform Specialist		x	x												
Constitute the Matric-Tech Steering Committee (MTSC) and Technical Working Groups		x													
Review and amend BISE and PTC regulations to integrate Matric on CBT&A		x	x												
Conduct labour market analysis in every district including IT trades and future expansion sectors			x	x											
Transform existing skill standards in IT to develop textbooks in school-compatible formats		x	x	x											
Develop digital ecosystem (Curricula Development, LMS, MIS, credit management system, assessment tools)		x	x	x											
Upgrade IT labs and digital infrastructure in 72 CoEs			x	x											
Train IT teachers of 72 schools			x	x											
Establish industry MoUs with Stakeholders at Principal and School level				x	x	x									
Institutionalise competency-based assessment + dual certification system				x	x	x									
Phase 2: Expansion & Diversification (2027–28)															
Upgrade IT infrastructure of 500 additional schools to lunch Matric Tech in IT					x	x	x								
Introduce Entrepreneurship Education across all 572 schools						x	x								
Purchase Tools and Equipment to Pilot core vocational trades in 72 CoEs					x	x	x								
Construct/Upgrade Training Hall Cum Production/Service Unit				x	x	x									
Strengthen teacher training systems and develop master trainers					x	x	x	x							
Establish System for Recognition of Prior Learning (RPL) mechanisms							x	x							
Expand industry linkages including SME consortia and overseas employment pathways							x	x	x						
Operationalise Production-cum-Service Units in CoEs where core vocational subjects have initiated									x	x					
Phase 3: System-Wide Scaling & Consolidation (2028–29)															
Upgrade IT Infrastructure to scale up IT Entrepreneurship streams to 1,500 additional schools											x	x			
Purchase tools, equipment furniture to expand core vocational trades from CoEs to high-readiness 500 schools											x	x			
Strengthen digital platforms (LMS, e-assessment, RPL systems)											x	x			
Integrate career counselling, job placement, and apprenticeship systems									x	x					
Embed programme funding into regular provincial budgets									x	x	x	x	x	x	x
Conduct quality assurance audits and accreditation (NVQF + international benchmarking)											x	x	x	x	x

17 Results Framework – Matric-Tech Programme

To expand equitable access to labour-market relevant secondary technical education in Khyber Pakhtunkhwa by introducing a competency-based Matric-Tech programme aligned with NVQF, industry demand, and digital delivery systems.

17.1 Project Development Objective (PDO) Level Indicators

PDO Indicators	Baseline (2025)	Year 1 (2026–27)	Year 2 (2027–28)	Year 3 (2028–29)	End Target
Number of schools offering Matric-Tech	0	72	572	2,072	2,500+
Student enrolment in Matric-Tech	0	1,800	30,400	67,900	100,100
% Female enrolment	0%	30%	35%	40%	≥45%
% Students achieving NVQF certification	0%	60%	70%	80%	≥85%
% Graduates employed/self-employed within 6 months	0%	—	30%	50%	≥65%

17.2 Intermediate Results Indicators

17.2.1 Component 1: Institutional Strengthening & Governance

Indicators	Baseline	Y1	Y2	Y3	Target
Matric-Tech Wing established in E&SED	No	Yes	—	—	Functional
Steering Committee & TWGs operational	No	Yes	Yes	Yes	Sustained
BISE regulations revised (CBT&A integration)	No	Yes	—	—	Fully implemented
Schools accredited under NVQF (min B-category)	0	50% of 72	60% of 572	70% of 2,072	≥80%

17.2.2 Component 2: Curriculum & Delivery Systems

Indicators	Baseline	Y1	Y2	Y3	Target
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IT curricula adapted (NVQF aligned)	No	Yes	—	—	Updated periodically
Entrepreneurship curriculum introduced	No	—	Yes	Yes	Scaled
Core TVET trades piloted	No	—	72 schools	300+ schools	Expanded
% instructional time for practical training	<20%	30%	40%	≥50%	≥60%

17.2.3 Component 3: Teacher & Trainer Capacity

Indicators	Baseline	Y1	Y2	Y3	Target
Teachers trained in CBT&A approach	0	144	1,216	3000	4360
Industry instructors engaged (contractual)	0		72	572	644+
Master trainers developed	0	50	150	200	400

17.2.4 Component 4: Infrastructure & Digital Systems

Indicators	Baseline	Y1	Y2	Y3	Target
Schools with upgraded IT labs	0	72	572	2,072	Full coverage
LMS and digital assessment system operational	No	Yes	Expanded	Fully scaled	Sustained
Students accessing digital learning platforms	0	10,000	100,000	300,000	500,000
School with Core Vocational Labs established	0		72	500	572

17.2.5 Component 5: Industry Linkages & Employment Outcomes

Indicators	Baseline	Y1	Y2	Y3	Target
Schools with active industry MoUs	0	72	400	1,200	2,000+

Students placed in internships/OJT (%)	0%	30%	50%	70%	≥80%
Functional CC&JP support systems	No	Pilot	Expanded	Scaled	Institutionalised
Production-cum-service units established	0	20	100	300	500

17.2.6 Component 6: Inclusion & Gender

Indicators	Baseline	Y1	Y2	Y3	Target
Female participation in non-traditional trades	<0%	15%	25%	35%	≥40%
Schools with gender-responsive facilities	Limited	30%	60%	80%	100%

