ANNEXES

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Annex 1: TVET Sector Analyses Report (TVET SAR 2022): Indicators and Achievements[1]

Performance area: 3.2 Access and equity					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Total**
Programs	6	32	26	58	64
Program duration (Years)	4 (+1 yr OJT)	3	1.5	1.5-3	
Minimum entry criteria	Grade 9	SEE	SEE	SEE	
No. of schools/Institutes	485	558	548	1,106	1,591
Province No.1	95	58	74	112	207
Madhesh	83	78	65	124	207
Bagmati	81	183	138	282	363
Gandaki	50	60	66	109	159
Lumbini	98	111	107	185	283
Karnali	30	76	79	129	159
Sudurpaschim	48	85	112	165	213
Total programs in offer	485	1,102	956	2,058	2,543
Province No.1	95	126	139	265	360
Madhesh	83	147	109	256	339
Bagmati	81	319	197	516	597
Gandaki	50	84	96	180	230
Lumbini	98	195	165	360	458
Karnali	30	103	109	212	242
Sudurpaschim	48	128	141	269	317
Enrolement capacity	23,280	46,024	38,107	84,131	107,411
Province No.1	4,448	5,336	5,560	10,896	15,344
Madhesh	3,350	6,234	4,344	10,578	13,928
Bagmati	3,986	13,044	7,905	20,949	24,935
Gandaki	2,715	3,550	3,810	7,360	10,075
Lumbini	5,315	8,188	6,488	14,676	19,991
Karnali	1,155	4,348	4,360	8,708	9,863
Sudurpaschim	2,311	5,324	5,640	10,964	13,275
Enrolement capacity by Program					
CEHRD. Technical stream	23,280				23,280
Pre-Diploma			38,107		38,107
Diploma		46,024			46,024
Actual enrolment	16,148	28,357	10,366	38,723	54,871

[1] TVET Sector Analysis Report (TVET SAR), 2022.

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Total
Actual enrolment (%)	29	52	19	71	51
Province No.1	2,946	3,532	1,170	4,702	7,648
Madhesh	2,606	4,056	1,294	5,350	7,956
Bagmati	2,581	8,546	1,700	10,246	12,827
Gandaki	1,551	2,201	976	3,177	4,728
Lumbini	3,480	4,993	2,019	7,012	10,492
Karnali	888	2,098	962	3,060	3,948
Sudurpaschim	2,096	2,931	2,245	5,176	7,272
No. of LLs with access to schools	426	-	-	386	637
LLs with access to schools (%)	57			51	85
Province No.1	87			46	106
Madhesh	71			51	100
Bagmati	68			66	105
Gandaki	42			49	72
Lumbini	81			52	100
Karnali	30			58	71
Sudurpaschim	47			64	83
LLs with access to schools (%)					85
Province No.1					76
Madhesh					74
Bagmati					88
Gandaki					84
Lumbini					91
Karnali					90
Sudurpaschim					94
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Sectorwise No. of Program	485	1,102	956	2,058	2,543
Agriculture	220	266	364	630	850
Engineering	264	403	333	736	1,000
Forestry		47	-	47	47
Health		371	235	606	606
Hospitality		13	7	20	20
Others	1	2	17	19	20
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Sectorwise Enrollment Capacity (2078)	23,280	46,024	38,107	84,131	107,411
Agriculture	10,571	10,640	14,560	25,200	35,771
Engineering	12,661	19,242	13,227	32,469	45,130

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Forestry	-	1,880	-	1,880	1,880
Health	-	13,662	9,400	23,062	23,062
Hospitality	-	520	250	770	770
Others	48	80	670	750	798
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Sectorwise Actual Enrollment (2078)	16,148	28,357	10,366	38,723	54,871
Agriculture	6,918	5,776	4,859	10,635	17,553
Engineering	9,200	11,870	5,235	17,105	26,305
Forestry	-	1,098	-	1,098	1,098
Health	-	9,374	-	9,374	9,374
Hospitality	-	236	79	315	315
Others	30	3	193	196	226

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Sectorwise Actual Enrollment by school type (2078)					
CEHRD (%)	69				
Private (%)				38	
TECS (%)				43	
Partnership (%)				57	
Constituent (%)				77	

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Enrollment Capacity	23,280	46,024	38,107	84,131	107,411
Actual Enrollment	16,148	28,357	10,366	38,723	54,871
Actual enrollment as % of capacity (2078)	69	62	27	46	51
Actual enrollment in school as % of capacity (2078)	70	62	49	56	52
School type	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**%**
Under CTEVT					
Constituent schools				63	6
Technical Education in Community Schools (TECS)				572	52
Partnership				42	4
Private				429	39
Total under CTEVT				**1,106**	**70**
Technical Stream in Community Schools (TS)	485				30
All total academic programs				1,591	100
Short term providers				1,355	

School type	CEHRD	Diploma	Pre-Diploma	CTEVT	%
Other ministries					Yet to be collected
Provincial governments					Yet to be collected
Share of current students					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Student number in surveyed schools (2078)	**16,262**	**28,357**	**10,366**	**38,723**	**54,985**
% of Girls	41.0	43.6	45.4	42.6	43.1
% of Dalits	12.1	10.1	12.2	12.2	11.1
% of Janajatis	31.7	30.9	31.1	31.4	31.2
% of Madhesis	15.4	16.9	13.5	14.7	15.8

Scholarships - Quaota and actual recepients					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Scholarship quota (2078)	**Free education**	**4,696**	**3,798**	**8,494**	
Number of scholarship recepients	As above	3,406	955	4,361	
Scholarship recepients		72.5	25.1	51.3	

Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
General education Gross enrolment rate (G9-10)					97.94
TVET Gross enrolment rate (G9-10)	2.71	-	-	-	
General education Net enrolment rate (G9-10)					71.46
TVET Net enrolment rate (G9-10)	1.71	-	-	-	
General education Gross enrolment rate (G11-12)					59.10
TVET Gross enrolment rate (G11-12)					3.57
General educiton Net enrolment rate(G11-12)					31.50
TVET Net enrolment rate (G11-12)	-	-	-	-	2.16

Performance area: 3.3 Expansion					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Total schools	**485**			**1,106**	**1,591**
Additional Schools(Program) from last year				6(16)	
% of Growth in Schools (2078 compared to 2077)	Zero			0.55	0.38

Performance area: 3.4 Quality			
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**
Schools accreditation	Zero	Zero	Zero
Program accreditation	Zero	Zero	Zero

TVET Models			
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**
School and OJT	x		x
School only	x	x	
Apprenticeship			x
Schools with some kind of workplace exposure		x	

Teacher management					
Indicator	**CEHRD**	**Diploma**	**Pre-Diploma**		
Instructor number					
Average Instructors (without parttime and private)	3.90	5.40	2.40	-	-
Average Asst-Instructors (without parttime and private)	2.00	0.60	0.50	-	-
Full time instructors	5.90	6.13	2.88	-	-
Part time instructors		4.52	1.07		
% of part time instructors		45	36		
Approved instructors number	7	10	3		
% of Deficit instructors	15%	39%	4%		
% of Deficit instructors constituent schools		104%			
% of instructors higher than approved			1		
% of part time instructors higher than approved		5%	6%		
Gender Parity Index in Teachers	0.12	0.73	0.27	-	-
Contract type					
Permanent	4	0.71	0.31		
Temporary/ service contract	7 (63.6%)	5.42 (88.4%)	2.57 (89.2%)		
Instructors' qualification					
% of Instructors with masters' degree	23.20	61.20	15.60	-	-
% of Instructors with Bachelors' degree	66.40	22.60	72.70	-	-
% of Asst-Instructors with Bachelors' degree	27.30	32.10	8.20	-	-
Instructors' training					

Indicator	CEHRD	Diploma	Pre-Diploma		
% of Instructors with TPD/OSU Training	6.00	1.20	4.30	-	-
% of Instructors with Industry Based/instructional Training	6.00	5.00	28.10	-	-
% of Asst-Instructors with TPD/OSU Training	7.80	1.90	19.20	-	-
% of Asst-Instructors with Industry Based/instructional Training	7.80	28.30	79.50	-	-
Instructors turnover					
Instructors	18.0	22.4	6.8	-	-
Assistant instructors	12.7	5.0	2.8		
Curriculum revision					
% of curriculum revised after 2073 BS	100%	57%	18%	-	-
% of curriculum revised before 2073 BS		43%	82%		
Standards revision					
% of standards revised after 2073 BS				29%	-
% of standards revised before 2073 BS				71%	-

Machine and euqipment	CEHRD	Diploma	Pre-Diploma		
% of Schools with >75% workable machines	61.00	61.00	58.00	-	-
% of Schools with 50-75% workable machines	23.00	13.00	17.00	-	-
% of Schools with <=50% workable machines	16.00	25.00	26.00	-	-

Performance area: 3.5 Efficiency

Promotion rate	CEHRD
Promotion Rate to Grade 10	85
Promotion Rate to Grade 11	78
Promotion Rate to Grade 12	61

Cycle Completion and Survival Rate	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Cycle Completion Rate (%)		52 (2072 intake)	38 (2076 intake)		
Agriculture		44	48		
Engineering		21	26		
Forestry		75			
Health		66	41		
Hospitality		57	54		
Others			19		
Survival Rate (%)		59 (2072 intake)			
Agriculture		69			
Engineering		39			
Forestry		85			
Health		66			
Hospitality		70			
Others					
Survival Rate to Grade 12	57.9 (Year)	-	-	-	

Repeatition Rate	CEHRD				
Repetition Rate (First year in CTEVT and first grade in CEHRD)	0.50	-	-	-	-
Repetition Rate (Second year in CTEVT and second grade in CEHRD)	0.30	-	-	-	-
Repetition Rate (Third year in CTEVT and third grade in CEHRD)	0.20	-	-	-	-
Repetition Rate (Fourth grade in CEHRD)	-	-	-	-	-

Drop out rate	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Dropout Rate (First year in CTEVT and Grade 9 in CEHRD)	-	-	-	-	-
Dropout Rate (Second year in CTEVT and Grade 10 in CEHRD)	14.50	-	0.10	-	-
Dropout Rate (Third year in CTEVT and Grade 11 in CEHRD)	21.70	-	0.80	-	-
Dropout Rate (Grade 12 in CEHRD)	38.80	-	-	-	-

Performance area: 3.6 Outputs					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Graduate till 2077.078	16,505	96,227	240,840	######	353,572
% Long term program graduation Rate			43.1(074/75)		
Instructors' training (upto 2077.78)					
Instructional training graduate				35,264	
Female %				36.6	
Male %				66.4	
Instructors' training (instructional skills)				61.0	
Instructors' training (OSU) %				1.6	
curriculum					
curriculum long term program	11	49	33	82	93
curriculum short term program (CTEVT only)				271	271
Skils standards				**304**	
Level 4				6 (2%)	
Level 3				41(13%)	
Level 2				92 (30%)	
Level 1				155 (51%)	
Elementry				10 (3%)	
Skills test graduates					
Skills test graduates	-	-	-	######	387,695
%Skills test graduation rate (2076.77)				73	
Skills test centers					
Accredited skills test centers				61 (8%)	
Unaccredited Skill test centers				700 (92%)	
Skills test human resources				**304**	
Master assessors				35	
Skill test assessor				7,464	
Model assessors				38	
Assessors with refresher training				510	
Knowledge products (2076)					
Comprehensive TVET annual report					1
TVET development journal				1	
Journal of training and development				1	
Annual report				1	

Performance area: 3.8 Outcomes					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Employment rate (2078)	29	66	61		49
Source of employment					
Public					22
Self employed					11
Private/ NGO					55
Foreign employmnet					11

Performance area: 3.7 Relevance					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Sector Skills Committees (Agriculture, construction and hospitality)					3
Legal provision for BIAs representation in CTVET bodies					
Assembly				17%	
Council				Zero	
NSTB Board				50%	
School Management Committee				11%	
Share of schools with BI/A in SMC	38.1	-	-	32.0	34.1
Average members in SMC	7.9	-	-	5.7	6.5
Average Business and Industry members in SMC	1 (13%)	-	-	1 (18%)	1.0
Share of schools with support from Business and Industry Associations (BIAs) in OJT/ internship	54.8	-	-	45.8	48.9
Share of schools with BIAs in OJT/ internship/ employment facilitation committee	23.4	-	-	22.8	23.0
Share of schools with BIAs in school operations	21.3	-	-	23.6	22.8
Share of schools with Bis in examination operations	3.0	-	-	19.5	13.8
Share of schools with annual labor market research	10.7	-	-	14.9	13.4

Performance area: 3.9 Integration					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Further education (2078)					
Share of Grade 10 graduates continuing grade 11 in general stream	24.8	-	-	-	-
Share of Grade 10 graduates continuing grade 11 in TVET stream	49.4	-	-	-	-
Share of Grade 12 graduates continuing education in general stream	20.4	-	-	-	-
Share of Grade 12 graduates continuing technical education	37.1	-	-	-	-
Share of CTEVT graduates continuing education in general education	-	14.7	14.6	-	-
Share of CTEVT graduates continuing education in technical education	-	22.3	12.0	-	-
Disarray in courses (courses not alinghed with each other)	Yes	Yes	Yes	Yes	
Public Service Commission Recognition					
Share of schools with issues on Public service commission recognition	42.1	27.3	36.1	-	34.6
University recognition					
Share of institutes with no issues on recognition from domestic universities (without recognition)	55.3	33.5	60.5	-	47.9
Share of institutes with no issues on recognition from foreign universities (without recognition)	73.2	59.5	76.2	-	68.4

Performance area: 3.10 Management					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Physical infrastructure					
Average Number of Buildings for TVET	1.8	-	-	1.6	1.6
Average number of classrooms for TVET	6.3	-	-	6.5	6.4
Share of schools with science lab	86.8	-	-	66.1	73.3
Share of schools with computer lab	85.8	-	-	67.2	73.7
Share of schools with computer lab for TVET	75.6	-	-	59.6	65.2

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Share of schools with internet facility	88.8	-	-	69.6	76.3
Share of schools with electricity facility	89.3	-	-	69.5	76.7
Average hours of electricity supply (hours)	15.9	-	-	15.5	15.6
Share of schools with disability friendly infrastructure for entrance (Ramp)	45.2	-	-	24.7	31.8
Share of schools with toilets for SWD	53.3	-	-	27.4	36.4
Share of schools with sign language interpreter for deaf	5.1	-	-	3.3	3.9
Share of schools with toilets for boys	93.4	-	-	69.9	78.1
Share of schools with girls'-friendly toilets	83.2	-	-	62.9	70.0
Share of schools with drinking water supply system (tap/ tanker)	75.6	-	-	48.8	58.1
Share of schools with water facility in toilets	78.4	-	-	81.9	70.0
Share of schools with 100x50 meters playground	70.1	-	-	54.8	60.1
Share of schools with garden	57.9	-	-	52.0	54.1
Share of schools with compound wall	68.0	-	-	42.3	51.2
Hostel and others					
Share of schools with girls' hostel	16.2	-	-	16.5	16.4
Share of schools with boys' hostel	25.4	-	-	16.0	19.3
Share of schools with hostel for students with disability (SWD)	12.7	-	-	11.8	11.7
School management					
Share of schools with active schools management committee	85.3	-	-	66.4	73.0
Share of schools with females in SMC	84.3	-	-	63.7	70.8
Average female members in SMC	2.3	-	-	1.6	1.9
Share of schools with separate head teacher	5.1	-	-	20.6	15.2
Share of schools with separate program coordinator	62.9	-	-	54.5	57.4
Share of schools with Principal/ head teacher with school management training	56.3	-	-	47.7	50.7
Share of schools with female headteacher/ principal	23.4	20.3	6.4		
Share of schools with staff job description	67.5	-	-	59.1	62.0

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Student support					
Share of schools with Student Career Counseling Unit (CCU)	34.0	-	-	41.2	38.7
Share of schools with additional support for academically weak students	74.6	-	-	59.1	64.5
Share of school Complaint handling system	75.6	-	-	58.5	64.5
Employment facilitation					
Share of schools organizing skills competition	35.0	-	-	31.2	32.5
Share of schools organizing employment market	6.6	-	-	11.9	10.1
Share of schools with graduate support for employment	42.6	-	-	41.7	42.0
Share of schools with graduate support for self -employment	49.7	-	-	46.6	47.7
Share of schools with Business Incubation Center	11.2	-	-	11.9	11.7
Share of schools with tracer study system	20.3	-	-	32.2	28.1
Communication					
Share of school with citizen charter	28.9	-	-	41.7	37.3
Share of school with Information Box	79.7	-	-	65.6	70.5
School income					
Share of schools with production unit	14.7	-	-	16.5	15.9
Share of schools with sales outlets	6.6	-	-	7.6	7.2
Share of schools with School Fund	58.4	-	-	51.2	53.7
Share of schools with Repair and maintenance Fund	34.5	-	-	40.1	38.2
MIS					
Share of schools with TVET MIS	22.3	-	-	24.4	23.7
Share of schools with Financial MIS	23.4	-	-	30.4	27.9
Audit					
Share of schools with social audit	38.1	-	-	32.0	34.1
Share of schools with financial audit	86.8	-	-	65.6	73.0
Others					
Share of schools with cafeteria	65.5	-	-	50.4	55.7
Share of schools with First Aid facility	76.6	-	-	63.1	67.8

Performance area: 3.11 Coordination					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Share of schools with coordination with federal level	70.6	-	-	57.2	61.8
Share of schools with coordination with provincial level	59.4	-	-	10.6	27.6
Share of schools with coordination with local level	87.3	-	-	63.4	71.1
Share of schools with coordination with business and industry	41.1	-	-	37.1	38.5

Performance area: 3.12 Governance					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
CTEVT Act 2045				Exists	
Bagmati Province TVET Act					Exists
Gandaki Province TVET Act					Exists
National Education Policy 2076 (TVET)					Exists

Performance area: 3.13 Finance					
Indicators	**CEHRD**	**Diploma**	**Pre-Diploma**	**CTEVT**	**Nepal**
Budget					
% Education budget share of National Budget					11.0
% TVET budget share of Education Budget (2078)					4.0
% CTEVT budget share of TVET Budget (2078)					50.0
% CEHRD budget share of TVET Budget (2078)					20.0
One time contribuion (per school annually)	4,000,000				
OJT expenses (per student after 3rd year completion - one time)	15,000				
Share of foreign assistant (2078)	3%			18%	

Program fee - CTEVT				
Discounted		68,846	7,627	
Full fee (CTEVT)		177,179	22,100	
Sponsored		308,109		
Technical educaiton in community schools (TECS)		200,000	70,000	
Private schools		352,800	110,000	

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Student/ parents actual contribution (2078)					
Parents' contribution (not the fee)	66,404				
Average student fee		197,262	57,264		
Audit practices					
Share of schools with social audit	38.8			32.0	34.1
Share of schools with financial audit	86.6			65.5	73.0

Performance area: 3.14 Monitoring and evaluation

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Share of schools with federal level M&E	45.2	-	-	50.9	48.9
Share of schools with provincial level M&E	43.1	-	-	59.6	53.9
Share of schools with local level M&E	85.3	-	-	56.1	66.3
Share of schools with BI's technical M&E	23.4	-	-	20.6	21.6

Performance area: 3.15 Knowledge management

Indicators	CEHRD	Diploma	Pre-Diploma	CTEVT	Nepal
Share of schools with communication mechanism	49.2	-	-	45.5	46.8
Share of schools with learning exchange meetings	46.7	-	-	41.5	43.3

Annex 2: TVET sector, Strengths, Weaknesses, Opportunities and Threats (SWOT)[2]

Strengths	Weaknesses
Access: Distribution of schools by province and local levels is evidence of Government commitment on enhancing access to, and inclusion and equity in TVET. Free Technical stream and various scholarship provisions under CTEVT programs are other examples this commitment.	**Access** Access is nearly met but instructional learning environment (ILE) as explained by 'Efficiency indicators' is weak. It undermines the efforts put on expansion so far.
	The sector is mainly focused on engineering, agriculture and health programs. Very few opportunities are explored in other sectors in view of both access and expansion.
Expansion: Government vision to open one CTEVT approved school in each local level is very strong indication of government commitment.	**Expansion:** Tendency is to establish schools by mapping with purpose to fill in the gap. The right approach is to follow TVET principles that pleads for demand-based service delivery with business and industry/ economic sectors linkage. However, this requirement appears to have overlooked in the recent times.
Quality: CTEVT has a proven system and output for quality assurance which include standards and curriculum development methods, skills testing system, instructors' training and assessment/examination system. Some of its schools are state-of-art in terms of the physical infrastructure such as land, machine and equipment and other physical infrastructure with highly experienced instructors and good teaching learning environment. These strengths are reflected in their quality outputs. These schools have recognition and reputation in the business and industry community.	**Quality:** • Application part of quality is weak in the whole sector. This study has evidence that schools suffer due to lack of revision in standards and curriculum, limited or no textbooks and instructional- learning-materials (ILM), insufficient number of instructors and their worrisome turnover, limited instructional and occupational skills upgrading, and limited workplace-based training opportunity, and insufficient number of workable machine and equipment. • Many schools/instructors have limited idea on how the partnership with Business and industry and its associations (BIAs) can enhance quality of delivery.
Efficiency: CTEVT promotion rate is good as it has low drop out and almost no repetition rate.	**Efficiency:** Promotion, and survival rates are weak in Technical stream. Pre/Diploma suffers from weak Cycle completion and survival rates.
Outputs: TVET system has prepared large number Pre/Diploma and intermediate level graduates as well as skills testing graduates up to level four. It has also quite good number of standards and curriculum. The country has also provided large number of short-term training opportunities.	**Outputs:** • Although the graduates' number is high, the expert workers from other countries occupying the high skills jobs in the country. • No work in preparation of Advance Diploma level graduates who probably will be in NVQ level 5 is done yet. This is not even properly visualized.

[2] TVET Sector Analysis Report (TVET SAR), 2022.

	• Most of the short-term training are stand-alone and can even be argued to be suffering from low quality. • In absence of data, their number is measured through skills test data as its proxy indicators.
Outcomes/ relevance: The TVET sector outputs such as standards and curriculum have facilitated both long- and short-term education and training across the country. It has also trained instructors who, in turn, work to prepare graduates. It has a proven Skills Testing System which has been catered through various un/accredited assessment centers. CTEVT has culture of partnering with business and industry that enhance opportunity for on the-job-training (OJT) and employment.	**Outcomes/relevance:** This study has found employment rate of Pre/Diploma somewhat satisfactory but not that of Technical stream. These employment rates, particularly with Technical stream, only undermine the efforts and investments made for the sector.
Finance: International development partners have been supporting the sector, oftentimes through grant support. The sector has also benefited from technical expertise inputs from such sources.	**Finance:** Government allocation for the sector has remained around 4% of education budget which, given country's vision to increase enrolment up to 70%, is very low. Also, as seen in the past, international support, except for support for infrastructure, human resources and system development, has mostly gone into short-term training whose returns are difficult to realize. Rather over supply of such training without considering employment outcome has recently been widely criticized and therefore, undermine the precious resources the government and international development partners have put into.
Private sector investment in TVET is substantial and have tendency to grow.	Private sector has yet to get both financial and non-financial incentives to encourage their productive engagement in TVET also in areas such as participation in school management, monitoring and evaluation and availing OJT and employment placement support. This is essential for encouraging further investment that could reduce public sector burden. Instead, there is trust deficit between the public and private sector.
	Notwithstanding the level efforts they have to make to prepare satisfactory outputs, private sector schools' fee is considered high than public sector. Oftentimes it becomes issue.
Governance: As mentioned above, Nepal has strong statutory provision (CTVET Act 2045) in place.	**Governance:** • No federal TVET Act is in place as yet. It has affected the legislative process at provincial level. This gap has made the provincial level work almost defunct. • As shown by membership in the CTEVT Assembly, its Council and School Management Committees, representation of Business and Industry is weak and mostly only ceremonial. Even the three Sector Skills Councils are not statutorily established and operate under the

	wishes of CTEVT, not as demanded by employment market. • This is the reason why their participation has remained ceremonial and also, unable to reflect their needs in the TVET system and eventually prepare the workforce competent enough for business and industry itself.
Opportunities	**Threat**
Quality elements: Massive scope exists for utilizing CTEVT's expertise and experience in standards and curriculum development, skills testing/ RPL, instructors' training necessary for enhancing the sector performance.	Understanding that TVET is second option and/ or it is for weak students undermines the potential of TVET. This could be one reason for continued reduction in student enrolment number particularly in the recent times.
Nepal could, through strengthening TITI, expand its services in other countries, which could also be excellent source of foreign exchange and also enormous learning opportunity for domestic TVET professionals.	Understanding that TVET only provides training in technical subject has shadowed other many vocational subjects which could also provide better learning opportunity, which in turn, could facilitate employment for students/ learners.
Outputs and outcomes: Through NVQS driven reform, the sector could produce high number of graduates at various levels. It also includes short term training graduates prepared from the credit-based modular courses interwoven with long-term curricula. It could support economically weak students as such curricula could open multiple exit and entry points to and from the world of work.	Due to business and industries reluctance to involve in TVET, graduates' employment opportunity has been shrinking.
Operationalization of NVQS: CTEVT and NSTB have substantial experience in curriculum development and implementation. What remains is developing new curriculum following measures to address the weaknesses explained above. This can be done through rapid implementation of reform oriented NVQS.	The reluctance of educationists and policy makers to operationalize the NVQS has been the biggest threat for sector development.
Integration: Nepal requires expert workers, managers and researchers in TVET. Preparation of this workforce is possible through vertical expansion of TVET opportunities, which in turn, will require speedy operationalization of NVQS as explained above. This could also address issues related to recognition and limited or no further educational pathways for graduates.	In absence of integration, students might drop out from education system and even pursue foreign migration which mean syphoning off of resources. This also mean both physical and brain drain.
Coordination/ synergy: Through enactment of federal TVET Act, and putting policy and reform plan in place, there is a big opportunity to reform the sector. Provinces and local levels who have now resources, could support implementation of statutory provisions and implementation of plans.	**Coordination/ synergy:** • In absence of umbrella TVET Act, the sector appears to be even more fragmented. This as problem continues at the federal level and has emerged at provincial level as well. All provinces apparently have intention to develop their own Act, policies and plans.

	• Moreover, in absence of good coordination and technical support, implementation of both long- and short-term training programs at the local level are reportedly less market responsive. This fact has been also proved by data from this study. • In summary, unless corrective/ supportive measures are in place, the sector fragmentation may drop to the worst level.

Annex 3: Lessons learned [3]

3.1 Abundant expansion

Data in the chapters on access and expansion suggest that opening new schools and expanding access are insufficient to make the TVET outputs market responsive. Such measures are only suitable for making investments while already knowing that these investments will not bring expected results. Therefore, other strategies such as mergers or expanding scholarships to study in already existing schools/ programs will be helpful in enhancing access and inclusion than establishing new schools.

3.2 Market relevance

All the Technical stream and Pre/Diploma courses appear to have been approved either by CEHRD or CTEVT and were based on needs of the time/ presumably market when these schools were established or decided to start the programs. Since then, these courses have been offered by public or private agencies alike notwithstanding the demands for related graduates. Unless they are approved to start new courses, once they are permitted to operate, even private sector schools keep on offering the same course. This is perhaps one of the reasons for low efficiency and outcomes and suggests inefficiency in the sector is more due to policy decisions than management level deficiency.

3.3 Workplace-based training (WBT) provision in the curriculum

WBT models such as on-the-job training (OJT) are not new in the sector. Therefore, in Pre-Diploma curricula and Technical stream, though not initially, is now provisioned. In Diploma, though not specifically under the OJT nomenclature, various modes of WBT models are provisioned. But the question is whether these models are implemented as provisioned in the curricula and if done so, how purposefully and seriously they are done. Yet, during many exchanges with school headteacher/ principals, they explained their difficulty that often, employers do not cooperate, and others, they do not have resources to support students during OJT. Even NRs. 15,000 per student allocated for Technical stream was insufficient for a one-year long OJT, which needs to be availed after completing of Grade 12. Unless statutory provisions enforce at least the public sector agencies to allow such opportunity, this problem may remain. Also, the end-of-course OJT in TVET steam has not been practical as OJT needs to move by semester/ or at least by year allowing students to finetune their skills learned while they were still in school. Similarly, unclear OJT provisions in the Diploma curriculum have been reason for them to be ineffective as implementation of this provision has remained at the discretion of school management or related instructors.

3.4 Formative assessment

Various indicators under the efficiency chapter have shown a serious need to put a quality instructional learning environment (ILE) in place. One way of achieving this is by enhancing students' learning outcomes, which is possible through lean but effective formative assessment focused on regular measurement of leaners' learning outcomes.

3.5 Incentives for instructors

Schools appear to have a focus, at the most, on practical training limited to learning purposes. However, TVET schools must target services by establishing market linkage. Proven

[3] TVET Sector Analysis Report (TVET SAR), 2022.

evidences suggest that income from such arrangements could avail financial incentives to both students and instructors.

3.6 TVET outcomes

Unless graduates of various TVET programs are able to secure employment, the investment made in them cannot be justified. Therefore, schools/ parents/ students must be oriented to these outcomes from the beginning of the program. Unless, it is done so, TVET programs, as have generally been in the past, will not be different from general education.

3.7 Support for CEHRD

The government has been investing a huge amount of resources in the Technical stream, but its efficiency is questionable. Therefore, an intensive focus is required to improve its performance through reform in curricula, teacher training and improvement in machine and equipment. Unless a concerted effort in place, problems in the Technical stream will remain. It is difficult to understand the factor that bars mobilizing its proven competences in research, curriculum development, instructor's development, for instance for reforming CEHRD TVET efforts.

3.8 Quality assurance body

CTEVT with over three decades of experience, which, albeit with some limitations, has enriched it with expertise in research, standards and curriculum development, skills testing, and instructor's development and assessment. With implementation of NVQS for several years now has understanding in how TVET system can be reformed. Therefore, CTEVT, as also provisioned in the governments' budget speech 2077/78, could be developed as a quality assurance body. Albeit need for overall curriculum reform, apparently, there is no reason why Technical stream schools should not follow the CTEVT curriculum or use the instructors' training resources it has. Therefore, unless effective collaboration exists between these two institutions, putting effort to improve these elements at the Technical stream will only 'reinvent the wheels.'

3.9 Operationalizing NVQS

TVET is wrongly conceived as a second option or a strategy to keep weak students in education so that they can engage in employment. However, as shown by this study, the TVET graduates have tendency to pursue further education. As informed by workshop participants when parents and students realize a narrow academic path after current TVET qualification levels, they leave their studies as early as Grade 10 and return to general education in Grade 11. Similarly, lack of recognition and further educational opportunity have affected enrollment in Pre-Diploma and Diploma programs. Therefore, it has been urgent to operationalize NVQS to facilitate a seamless academic path while also enhancing employment opportunity. There are no reason why technically competent people have to be certified and recognized by people who do not understand these critical elements of education[4].

3.10 Expansion of apprenticeship program

Butwal Training Institute has been offering TVET programs through apprenticeship model of implementation for many years now. CTEVT has also started this model in Pre-Diploma level. So far there have been very encouraging outcomes and also and so have been the responses

[4] *Pradhan, H. 2019. Struggle for Development and Operationalization of NVQS in Nepal. Progress and Pitfalls in Nepal TVET (Chapter from Book in progress).*

of Business and Industries. Therefore, this implementation model needs to be considered in Technical stream and Diploma programs as well.

3.11 Unlearning the lessons learned

As explained earlier, government and international development partners have poured in the resources for learners' competency development and for long. During these years, plethora of policy and system failures have been researched, documented and widely realized. Still, with purpose to reform the sector, no comprehensive plan connecting the dots has been put in place as yet.

Annex 4: List of people consulted

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8	Sudarshan Marahatta	Under Secretary	TSC	9841396718	marahattas123@yahoo.com
9	Renuka Pandey	Under Secretary	TSC	9841420031	renukapandey06@gmail.com
10	Sangita Regmi	Under Secretary	TSC	9841297631	regmi-5@hotmail.com
.11	Suresh Kumar Joshi	Director	CEHRD	9831355515	jpshi511@yahoo.com
12	Arjun Dhakal	Director	CEHRD	9846278754	arjundhakal52@yahoo.com
13	Ramchandra Sharma	Director	CEHRD	9849628615	timilsinaramchandra@gmail.com
14	Chandra Prasad Sharma	Section Officer	CEHRD	9851065926	chandrasharama913@gmail.com
15	Ishwor Prasad Sharma	Under Secretary	MoEST	9851731280	ishwarkaphle@gmail.com
16	Binod Gelal	Under Secretary	CEHRD	9851227984	gelalbinodgelal@yahoo.com
17	Ramesh Prasad Mainali	Unit Chief	EDCU	9840780316	mainalyrpe@gmail.com
18	Mahendra Bahadur Chhetri	Chief Education Deputy	Lalitpur Metropolitan City	9843643322	mahendrakshetri@yahoo.com
19	Nanda Lal Paudel	Unit Chief	EDCU, Kathmandu	9851201285	nandapaudel@yahoo.com
20	Ram Prasad Subedi	Education Officer	KMC	9841329059	rpsubedi191@gmail.com
21	Krishna Prasad Sharma	Controller	NEB	9841373803	nebkrishna@gmail.com
22	Kewali Ram Adhikari	Under Secretary	EVENT-II	9842050673	k2023adhikari@gmail.com
23	Tej Prasad Prasai	Under Secretary	MoEST	9841743414	tejprakashprasai20@gmail.com
24	Binod Bhattarai	Assistant Director	University Grant Commission	9851187601	b.bhattarai@ugenepal.edu.np

S.N.	Name	Designation	Organization	Phone number	Email
25	Dhana Giri	Samabini	Madyapur Education	9847838230	dhanag367@gmail.com
26	Jaya Prasad Acharya	Under Secretary	MoEST	9841429703	acharyajayaprasad@gmail.com
27	Rudra Prasad Adhikari	DDG	CEHRD	9849930143	rudrap@hotmail.com
28	Shree Prasad Bhattarai	DDG	CEHRD	9841506161	shreepdb101@gmail.com
29	Divya Dawadi	Director	CEHRD	9862702429	divyadawadi@gmail.com
30	Ganesh Prasad Dhakal	Unit Chief	EDCU, Lalitpur	9851190284	dhakalg2002@yahoo.com
31	Subhash Dhakal	IT Director	MoEST	9851092929	subhash.dhakal@nepal.gov.np
32	Nilkantha Dhakal	Director	CEHRD	9856052484	nkdhakal@yahoo.com
33	Girman Thapa	Director	CEHRD	9841390654	thapagirman@yahoo.com
34	Bhuvaneswar Dhungana	Director	CTEVT	9856038235	bhuvaneshor@gmail.com
35	Deepak Babu Aryal	Deputy Director	CTEVT/Planning Division	9841238310	dbaryal2000@gmail.com
36	Chandra Kanta Bhusal	PD	EVENT Project-II	9851353741	ckbhusal033@gmail.com
37	Shiva Ram Shrestha	Finance Officer	CTEVT	9851101416	shivaramshrestha@gmail.com
38	Shalik Ram Bhusal	Director	CDC	9860922325	shalikargha@gmail.com
39	Tilak Ram Paudel	OA	CEHRD	9860721688	
40	Dipak Bhandari	Section Officer	MoEST	9857064058	dpkbhandari39@gmail.com
41	John Mountford	Team Leader	Dakchyata		-
42	Rajendra Shrestha	DTL	Dakchyata	9851201973	rajendrashresthabritishcouncil.org.np
43	Kul Bahadur Phadera	US	MoEST		kbphadera@gmail.com
44	Dr Hari Pradhan	Team Leader	British Council		drharipradhan@gmail.com
45	Roshan Ghimire	Project Manager	CPPD		rosh.ghimire@gmail.com
46	Rajendra Prasad Adhikari		CPPD	9851038784	adhikari_rajendra@outlook.com
47	Bishal Chalise	Economist	CPPD	9851272555	bishalkcchalise@gmail.com
48	Sita Paudel	GESI expert	CPPD		sitapaudel@gmail.com
49	Chuman Babu Shrestha	Planning expert	CPPD		chumanbabus@gmail.com
50	Nijendra Pratap Shrestha	Documentation Officer	CPPD		shresthanijendra@gmail.com

4.5 Inter Ministries Workshop मितिः २०७९।०५।२५ गते, बुधबार **(August 10, 2022)**

S.N.	Name	Designation	Organization	Phone number	Email
1	Ram Krishna Subedi	Secretary	MoEST		
2	Kamal Prasad Pokhrel	Joint Secretary	MoEST		
3	Deepak Sharma	Joint Secretary	MoEST		
4	Hari Prasad Lamsal	Joint Secretary	MoEST	9851115902	lamsalhp@hotmail.com
5	Bhagawan Aryal	Joint Secretary	MoEST	9851122833	
6	Kul Bahadur Phadera	Under Secretary	MoEST	9845369402	
7	Mukesh Kumar Kesari	Director	Department of Immigration	9851181213	Mukesh525@gmail.com
8	Nagendra Prasad Dahal	Section Officer	MoEST	9851240538	dahalnagendraprasad@gmail.com
9	Dipak Bhandari	Section Officer	MoEST	9857064058	dpkbhandari39@gmail.com
10	Rekha Pandey	Under Secretary	Ministry of Communication and Information Technology	9841712791	Linakc.ramkod@gmail.com
.11	Uttam Babu Bhattarai	Director	Nepal Mountain Academy	9851032688	uttamjee@gmail.com
12	Manju Kumari Pokharel	Section Officer	Ministry of Law, Justice and Parliamentary affairs	9851139453	Manjuk.pokharel@g,ail.com
13	Prakash Thapa	Under Secretary	Ministry of Forests and Environment	9849010358	Prakash.thapa013@gmail.com
14	Mahendra Kumar Sapkota	Under Secretary	Ministry of Federal Affairs and General Administration	9841219987	mksapkota7@gmail.com
15	Dr. Krishna Bahadur Ghimire	Under Secretary	Ministry of youth and sports	9843632477	
16					ghimire.krishna@gmail.com
17	Laxmi Kumar Khadka	Under Secretary	MoEST	9851089362	Khadka011@gmail.com

S.N.	Name	Designation	Organization	Phone number	Email
18	Debaka Dhakal	Section Officer	MoEST	9851156054	dwdhakal@gmail.com
19	Suman Salika		Ministry of Urban Development	9841923660	sumansalike@gmail.com
20	Dipak Babu Aryal	Deputy-Director	CTEVT	9851038310	dbaryal2000@gmail.com
21	Bishnu Kumari Adhikari	Section Officer	Ministry of foreign affairs	9841981231	Adhikary.bishnu@gmail.com
22	Suresh Kumar Joshi	Director	CEHRD	9841355515	Joshi511@yahoo.com
23	Kewaliram Adhikari	Under Secretary	EVENT-II	9842050673	K2023adhikari@gmail.com
24	Basu Dev Osti	Under Secretary	National Planning Commission	9841549952	basuosti@gmail.com
25	Dr. Hari Pradhan	Team Leader	British Council		
26	Rajendra Prasad Adhikari		CPPD	9851038784	
27	Chuman Babu Shrestha	TVET planning Expert	CPPD	9841217590	chumanbabus@gmal.com
28	Sita Paudel	GESI Expert	CPPD	9851187688	
29	Roshan Ghimire	Project Manager	CPPD	9851204309	rosh.ghimire@gmail.com
30	Nijendra Pratap Shrestha	Documentation Officer	CPPD	9851172305	
31	Suzana Kansakar	Project Support	CPPD	9841993433	Suzi.ya@gmail.com
32	Pratikshya Pandey	Logistic Support	CPPD	9869098857	Pandeypratikshya99@gmail.com
33	Parbat Gadaili	Reporter	Rojgar Media Pvt. Ltd.	9840985801	parbatboo@gmail.com

4.6 Workshop with Business and Indstry *मितिः २०७९।०४।२६ गते, बिहीवार* **(August 11, 2022)**

S.N.	Name	Designation	Organization	Phone number	Email
1	Ram Krishna Subedi	Secretary	MoEST		
2	Kamal Prasad Pokhrel	Joint Secretary	MoEST		
3	Deepak Sharma	Joint Secretary	MoEST		
4	Hari Prasad Lamsal	Joint Secretary	MoEST	9851115902	lamsalhp@hotmail.com
5	Bhagawan Aryal	Joint Secretary	MoEST	9851122833	
6	Kul Bahadur Phadera	Under Secretary	MoEST	9845369402	
7	Mukesh Kumar Kesari	Director	Department of Immigration	9851181213	Mukesh525@gmail.com
8	Nagendra Prasad Dahal	Section Officer	MoEST	9851240538	dahalnagendraprasad@gmail.com
9	Dipak Bhandari	Section Officer	MoEST	9857064058	dpkbhandari39@gmail.com
10	Rekha Pandey	Under Secretary	Ministry of Communication and Information Technology	9841712791	Linakc.ramkod@gmail.com
.11	Uttam Babu Bhattarai	Director	Nepal Mountain Academy	9851032688	uttamjee@gmail.com
12	Manju Kumari Pokharel	Section Officer	Ministry of Law, Justice and Parliamentary affairs	9851139453	Manjuk.pokharel@g,ail.com
13	Prakash Thapa	Under Secretary	Ministry of Forests and Environment	9849010358	Prakash.thapa013@gmail.com
14	Mahendra Kumar Sapkota	Under Secretary	Ministry of Federal Affairs and General Administration	9841219987	mksapkota7@gmail.com
15	Dr. Krishna Bahadur Ghimire	Under Secretary	Ministry of youth and sports	9843632477	
16					ghimire.krishna@gmail.com
17	Laxmi Kumar Khadka	Under Secretary	MoEST	9851089362	Khadka011@gmail.com

S.N.	Name	Designation	Organization	Phone number	Email
18	Debaka Dhakal	Section Officer	MoEST	9851156054	dwdhakal@gmail.com
19	Suman Salika		Ministry of Urban Development	9841923660	sumansalike@gmail.com
20	Dipak Babu Aryal	Deputy-Director	CTEVT	9851038310	dbaryal2000@gmail.com
21	Bishnu Kumari Adhikari	Section Officer	Ministry of foreign affairs	9841981231	Adhikary.bishnu@gmail.com
22	Suresh Kumar Joshi	Director	CEHRD	9841355515	Joshi511@yahoo.com
23	Kewaliram Adhikari	Under Secretary	EVENT-II	9842050673	K2023adhikari@gmail.com
24	Basu Dev Osti	Under Secretary	National Planning Commission	9841549952	basuosti@gmail.com
25	Dr. Hari Pradhan	Team Leader	British Council		
26	Rajendra Prasad Adhikari	Governance expert	CPPD	9851038784	
27	Chuman Babu Shrestha	TVET planning Expert	CPPD	9841217590	chumanbabus@gmal.com
28	Sita Paudel	GESI Expert	CPPD	9851187688	
29	Roshan Ghimire	Project Manager	CPPD	9851204309	rosh.ghimire@gmail.com
30	Nijendra Pratap Shrestha	Documentation Officer	CPPD	9851172305	
31	Suzana Kansakar	Project Support	CPPD	9841993433	Suzi.ya@gmail.com
32	Pratikshya Pandey	Logistic Support	CPPD	9869098857	Pandeypratikshya99@gmail.com
33	Parbat Gadaili	Reporter	Rojgar Media Pvt. Ltd.	9840985801	parbatboo@gmail.com
34	Amira Chaudhary	Support Staff	MoEST		
35	Dhana K.C	Non-Gazet	MoEST		
36	Padma Dhakal	office Assistat	MoEST		

4.7 List of Workshop Participants in Province 1 मितिः २०७९।०५।२९ र ३० गते (August 14-15, 20 22)

SN	Name	Designation	Organization
1	Ho. Rajan Rai	Minister	Ministry of Social Development, Province1
2	Ho. Bishnu Tumbahamphe	State Minister	Ministry of Social Development, Province1
3	Dirgha Raj Mainali	Secretary	Ministry of Social Development, Province1
4	Ho. Sarita Thapa	Province Assembly	Ministry of Social Development, Province1
5	Ho. Ram Chandra Limbu	Province Assembly	Ministry of Social Development, Province1
6	Ho. Laxman Tiwari	Province Assembly	Ministry of Social Development, Province1
7	Ho. Niran Rai	Province Assembly	Ministry of Social Development, Province1
8	Ram Chandra Limbu	Province Assembly	Ministry of Social Development, Province1
9	Bhupendra Kumar Lawati	Mayor	Letang Municipality, Morang
10	Regina Bhattarai Prasai	Deputy Mayor	Damak Municipality
11	Ramesh K Shah	Section Officer	Dharan Sub Metro Politian
12	Krishna Prasad Pokhrel	Under Secretary	Ministry of Social Development
13	Navraj Koirala	Director	Council for Technical Education and Vocational Training, Itahari
14	Yogeshwor Bhattarai	Unit Chief	Education Development and Coordination Unit, Taplejung
15	Lal Bahadur Bista	Technical Coordinator	Education Development and Coordination Unit, Sankhuwasabha
16	Semanta Gautam	Unit Chief	Education Development and Coordination Unit, Taplejung, Khotang
17	Tanka Prasad Gautam	Unit Chief	Education Development and Coordination Unit, Taplejung, Morang
18	Raj Kumar B.K.	Unit Chief	Education Development and Coordination Unit, Taplejung, Jhapa
19	Netra Prasad Gajurel	Unit Chief	Education Development and Coordination Unit, Taplejung, Okhaldhunga
20	Rajendra Budhathoki	Director	Education Directorate Development, Dhankuta
21	Parshuram Rai	Deputy Director	Council for Technical Education and Vocational Training, Itahari
22	Deepak Khanal	Principal	Ratna Kumar Bantawa Polytechnic Institute, Ilam
23	Manju Ghimire	Principal	Okhaldhunga School of Health Science, Okhaldhunga
24	Dam Kumar Kunwar	Principal	Bhanu Secondary School, Jhapa
25	Amrit Bahadur Karkee	Principal	Sharadha Secondary School, Sankhuwasabha
26	Gagan Shrestha	Principal	Shree Secondary School, Udayapur

SN	Name	Designation	Organization
27	Medini Ghimire	Principal	Mahendra Secondary School, Sankhuwasabha
28	Sitaram Rai	Principal	Diktel Technical, Khotang
29	Tek Narayan Shah	Principal	Shree Janata Secondary School, Morang
30	Rekraj Pokhrel	Principal	Shree Saraswoti Secondary School, Illam
31	Dhan Kumar Chongbang	Principal	Shree Narayani Secondary School, Taplejung
32	Bishal Kumar Roy	Civil Engineer Teacher	Birat Bahira Secondary School
33	Suresh Malla Thakuri	Civil Engineering Coordinator	Mahendrodaya Secondary School, Khotang
34	Mitra Prasad Ghimire	Parents	Janata Secondary School, Morang
35	Ganesh Dahal	Coordinator	Sailaja Acarhya Memorial Polytechnic Institute, Itahari
36	Diwas Khadka	Students	Janata Secondary School, Morang
37	Rabindra Kumar Pandit	Section Officer	Rangeli Municipality, Morang
38	Krishna Raj Rai	Under Secretary	Letang Municipality, Morang
39	Chandra Upadhaya	Assistant Professor	Mahendra Morang Campus
40	Suraj Raj Ghimire	Training Chief	Education Training Center, Sunsari
41	Prabin Khadka	Section Officer	Damak Municipality, Jhapa
42	Bijaya Hari Sharma	Director General	Confederation of Nepalese Industries
43	Durga Prasad Khatiwada	Under Secretary	Biratnagar Metropolitan
44	Gopal Prasad Dahal	Section Officer	Ministry of Social Development, Province1
45	Lila Ballav Ghimire	President	Federation of Nepali Journalist, Province 1
46	Prem Kumar Thaha	House Wife	Returning Migrant
47	Sita Karki	House Wife	Returning Migrant
48	Chandra Bahadur Basnet	Parents	Returning Migrant
49	Dev Narayan Chaudhary	Program Officer	Sami/ Helvetas Nepal
50	Shrawan Dhami	District Chair Person	Migrant Right Network Community
51	Sanjib Kumar Rai	Province Manager	ENSSURE/Helvetas
52	Krishna Shah	Board member	Nepal Tourism Board

4.8 List of Workshop Participants in Bagmati Province मितिः २०७९।०४।०१३ र १४ गते **(July 29-30, 2022)**

SN	Name	Designation	Organization
1	Ho. Kumari Moktan	Minister	Ministry of Social Development Bagmati
2	Ho. Saraswoti Bati	Parliament Member	Parliament Member, Bagmati
3	Ho. Goma Bhurtel	Parliament Member	Parliament Member, Bagmati
4	Ho. Maina Achami	Parliament Member	Parliament Member, Bagmati
5	Ho. Keshav Prasad Pokhrel	Parliament Member	Parliament Member, Bagmati
6	Ho. Dawa Dorje Lama	Parliament Member	Parliament Member, Bagmati
7	Ho. Prakash Shrestha	Province Member	Province Assembly, Bagmati
8	Ho. Bijaya Shrestha K.C	Province Member	Province Assembly, Bagmati
9	Ho. Krishna Hari Khadka	Secretary	Province Assembly, Bagmati
10	Bhimsen Khatri	Province Member	Province Assembly, Bagmati
11	Ashok Byanju Shrestha	Mayor	Dhulikhel Municipality
12	Sarita Bhattarai	Deputy Mayor	Surya Binayak Municipality
13	Hari Prasad Lamsal	Joint Secretary	Ministry of Education, Science and Technology
14	Bijaya Raj Subedi	Under secretary	Ministry of Education, Science and Technology
15	Dipak Bhandari	Section Officer	Ministry of Education, Science and Technology
16	Shree Krishna Nepal	Secretary	Ministry of Social Development Bagmati
17	Kamal Prasad Pokhrel	Joint Secretary	Ministry of Education, Science and Technology
18	Bishwo Babu Pudasaini	Province secretary	Ministry of industry Commerce and Supply
19	Krishna Prasad Dangal	Principal	Shree Mahendrodaya M.V Sindhupalanchowk
20	Sushil Adhikari	Principal	Technical Training and Research Institute, Lalitpur
21	Er. Umesh Aryal	Principal	Thaha Polytechnic Institute, Makawanpur
22	Nirmal Kumar Ghimire	Unit Chief	Education Development and Coordination Unit, Sindhuli
23	Ganesh Prasad Dhakal	Unit Chief	Education Development and Coordination Unit, Lalitpur
24	Rudra Hari Bhandari	Director	Ministry of Social Development, Bagmati
25	Nanda Lal Paudel	Unit Chief	Education Development and Coordination Unit, Kathmandu
26	Sheshkanta Paudel	Section Officer	Lalitpur Metropolitan City

SN	Name	Designation	Organization
27	Khubiram Adhikari	Training Chief	Education Training Center, Kavre
28	Tej Bikram Thapa	Coordinator	Sindhuli Community Technical Institute
29	Ajit Kumar Gupta	Assistant Director	Federation of Nepalese Chamber of Commerce and Industry
30	Dinanath Gautam	Unit Chief	Education Development and Coordination Unit, Makawanpur
31	Bhumilal Sharma Subedi	Unit Chief	Education Development and Coordination Unit, Chitwan
32	Krishna Prasad Subedi	Unit Chief	Education Development and Coordination Unit, Sindhupalanchowk
33	Tailendra Acharya	Province Director	Council for Technical Education and Vocational Training, Bagmati
34	Madhav Prasad Dahal	Principal	Shree Bhutandevi Secondary School, Hetauda
35	Harihar Pokhrel	Under Secretary	Ministry of labor Employment and Transportation, Hetauda
36	Bidur Kafle	Technical Officer	Council for Technical Education and Vocational Training, Bagmati
37	Dilliman Shrestha	Vice Principal	Adarsha Shaul Secondary School, Lalitpur
38	Tathya Dhamal	Student	Adarsha Shaul Secondary School, Lalitpur
39	Anthony Shakya	Parents-President	Adarsha Shaul Secondary School, Lalitpur
40	Tarapati Kharel	Section Officer	Kathmandu Metropolitan
41	Ratna Bahadur Katuwal	Under Secretary	Surya Binayak Municipality
42	Purna Bahadur Darji	Director	Education Development Directorate, Makawanpur
43	Shreejana Arya	Secretary	Federation of Nepali Journalist
44	Shankar Babu Shrestha	Unit Chief	Education Development and Coordination Unit, Dolakha
45	Khem Kaji Baral	Assistant Principal	Kapilakot Secondary School, Sindhuli
46	Saroj Kumar Pandey	Principal	Tilingtar Secondary School
47	Bishnu Bhattarai	Campus Chief	Manmohan Memorial institute of Health Science, Kathmandu
48	Sanjib Kumar Joshi	Parents	Mahendra Rastriya Secondary School, Kathmandu
49	Shikshya Joshi	Student	Mahendra Rastriya M.V, Kathmandu
50	Dev Raj Gurung	Principal	Mahendra Rastriya M.V, Kathmandu
51	Bhoj Kumar Thakuri	Section Officer	Dhulikhel Municipality
52	Ram Prasad Subedi	Section Officer	Kathmandu Metropolitan
53	Buddhi Raj Subedi	Principal	Nepal Secondary School, Chitwan

SN	Name	Designation	Organization
54	Sarita Regmi	Principal	Narayani Polytechnic Institute, Chitwan
55	Ashok K.C	Leader	Himalaya Media
56	Purna Dev Paneru	Section Officer	Education Development Directorate, Makawanpur
57	Maya Sherpa	Principal	Bigu Polytechnic Institute, Dolakha
58	Shubhadra Paudel	IT Teacher	Nepal Secondary School, Chitwan
59	Ugin Dangol	Student	Adarsha Shaul Secondary School, Lalitpur
60	Suman Bhatta	Driver	Education Development and Coordination Unit, Kathmandu
61	Ek Raj Karki	Driver	Education Development and Coordination Unit, Dolakha
62	Anil Mishra	Driver	Education Development and Coordination Unit, Sindhuli
63	Madhav Thapa	Driver	Education Development and Coordination Unit, Lalitpur
64	Bijaya Paudel	Driver	Ministry of labor Employment and Transportation, Hetauda
65	Dilli Prasad Nepal	Driver	Education Development and Coordination Unit, Sindhupalanchowk
66	Rajesh Gurung	Driver	Education Development and Coordination Unit, Chitwan
67	Pramit Lama	Driver	MoSD, Hetauda
68	Nakula Gurung	Driver	Narayani Polytechnic Institute, Chitwan
69	Pasang	Driver	MoSD, Hetauda
70	Kale Tamang	Driver	ETC, Kavre
71	Pradeep Timsina	Driver	Province Assembly
72	Sonam Singh	Driver	Province Assembly
73	Santa Lama	Driver	Province Assembly
74	Raju Karki	Driver	Province Assembly
75	Tara Thapa	Personal Assistant	Province Assembly
76	Shikhar Nagha Ghulal	Driver	Ministry of Social Development, Hetauda
77	Dhamuraj Pandey	Driver	Education Development and Coordination Unit, Makawanpur
78	Suman Luitel	Driver	Council for Technical Education and Vocational Training, Bagmati
79	Bikash Nagarkoti	Employee	Ministry of Labor
80	Surya Lal Suwal	Driver	Dhulikhel Municipality

4.9 List of Workshop Participants in Gandaki Province मितिः २०७९।०४।२९ र ३० गते **(August 14-15, 2022)**

SN	Name	Designation	Organization
1	Mekha Lal Shrestha	Minister	Ministry of Social Development
2	Khem Bikram Shahi	Chairperson	State Affair Committee, Provincial Assembly, Gandaki Province
3	Devendra Lamichane	Secretary	MoECSTSD
4	Indira Darai	Deputy Mayor	Byas Municipality
5	Nabaraj Ojha	Chairperson	Rupa Municipality
6	Uddhim Raj Paudel	Unit Chief	Education Development and Coordination Unit, Mustang
7	Narayan Prasad Subedi	Unit Chief	Education Development and Coordination Unit, Kaski
8	Krishna Chandra Pokhrel	Unit Chief	Education Development and Coordination Unit, Nawalpur
9	Hem Prasad Acharya		Pokhara Metropolitan City
10	Ram Prasad Acharya	Officer, 10th	Ministry of Tourism Industry and Commerce, Gandaki
11	Moti Lal Sharma	Officer, 10th	Gandaki Technical Education and Vocational Training Academy
12	Ambika Prasad Acharya	Director	Education Directorate Development
13	Bishnu Prasad Bhattarai	Unit Chief	Education Development and Coordination Unit, Gorkha
14	Laxman Timsina	Director	Gandaki Polytechnic Institute
15	Rajiv Kumar Thakur	Vice-Principal	Pokhara Technical School
16	Omkar Gharti Magar	Student	Pokhara Technical School
17	Sadikshya Acharya	Student	Pokhara Technical School
18	Sandesh K.C	Guardian	Pokhara Technical School
19	Rabindra Ghimire	Acting Secretary (CO, 8th)	Province Assembly Secretariat, Gandaki Province
20	Rita Thapa Magar	Head of Department	Pokhara Technical Health Multipurpose Institute, Pokhara
21	Khadananda Baral	Member of School Management Committee	Sukraraj Secondary School, Pokhara-
22	Naranath Baral	Principal	Sukraraj Secondary School, Pokhara-
23	Rishi Raj Bastola	Section Officer	Ministry of Education, Culture, Science and Technology

SN	Name	Designation	Organization
24	Kusma Raj Upadhyaya	Under Secretary, Unit Chief	Education Development and Coordination Unit, Baglung
25	Shiva Raj Pathak	Instructor	Dhaulagiri Polytechnic Institute, Balewa, Baglung
26	Bal Ram Bhugai	Education Officer	Annapurna Rural Municipality
27	Ram Chandra Adhikari	Principal	Janahit Secondary School, Jomsom, Mustang
28	Bhumaheshwar Ranjitkar	Deputy Director	CTEVT Gandaki Province, Kaski
29	Eka Bahadur Gurung	Principal	Satyawati Secondary School, Byas
30	Nepal Hari Ranabhat	Training Chief	Education Training Center, Gandaki, Tanahun
31	Kishor Bastola	Technical Assistant (Education)	Byas Municipality
32	Dr. Som Nath Sapkota	Executive Director	Gandaki Technical Education and Vocational Training Academy
33	Pramod Bhakta Acharya	Director, CTEVT province	Council for Technical Education and Vocational Training
34	Jharana Baral	Student	Shree Sukraraj Secondary School
35	Archana Baral	Student	Shree Sukraraj Secondary School
36	Dr. Santwana Sherchan	Agriculture Instructor	Dhaulagiri Technical School, Mustang
37	Bishnu Prasad Paudel	Section Officer	Gandaki Province Assembly Secretariat
38	Toyanath Lamsal	Under Secretary	Ministry of Education, Culture, Science and Technology, Gandaki
39	Rasina Gurung	Student	Pokhara Technical Health Multiple Institute
40	Ayush Lamichhane	Student	Pokhara Technical Health Multiple Institute
41	Ram Nath Lamsal	Principal	Kaligandaki Polytechnic Institute, Tanahun
42	Bishnu Prasad Paudel	Vice-Principal	Gorkha Polytechnic Institute
43	Kshitij Gurung	Course Coordinator	Gorkha Polytechnic Institute
44	Sagar Neupane	Technical Co-coordinator	Janata Secondary School
45	Resam Bahadur Shris	Head Teacher	Dhaulagiri Deaf Secondary School
46	Mina Chhetri	Parent	Pokhara Technical Health Multiple Institute
47	Basanta Raj Paudel	Unit chief	Education Development and Coordination Unit, Tanahun

SN	Name	Designation	Organization
48	Sandip Paudel	Section Officer (7th level)	Rupa Rural Municipality
49	Kul Bahadur Phadera	Under Secretary	Ministry of Education, Science and Technology
50	Hari Pradhan	Team Leader	British Council
51	Chuman Babu Shrestha	Planning expert	Centre for Public Policy Dialogue
52	Sita Paudel	Gender and Social Inclusion Expert	Centre for Public Policy Dialogue
53	Roshan Ghimire	Program coordinator	Centre for Public Policy Dialogue
54	Nijendra Pratap Shrestha	Documentation Officer	Centre for Public Policy Dialogue
55	Suzana Kansakar	Logistics support	Centre for Public Policy Dialogue
56	Nripa Devkota	Program support	Centre for Public Policy Dialogue

4.10 List of Workshop Participants in Karnali Province *मितिः २०७९।०५।०९ र १० गते* **(August 25-26, 2022)**

SN	Name	Designation	Organization
1	Devi Oli	Chairperson	Ministry of Social Development – Province Assembly
2	Krishna Prasad Kapri	Secretary	Ministry of Social Development, Karnali Province
3	Nilkantha Khanal	Deputy-Mayor	Birendranagar Municipality
1	Babita Regmi	Technical Assistant	Education Development Co-ordination Unit, Mugu
2	Binod Acharya	Under-Secretary	Ministry of Social Development, Surkhet
3	Dharmajit Shahi	Under-Secretary	Human Resource Development Centre
4	Dipa Hamal	Under-Secretary	Education Directorate Direction, Karnali Province, Surkhet
5	Prem Prasad Baskota	Training Focal Person (T.O)	Council for Technical Education and Vocational Training, Karnali Province
6	Kaviraj Khatri	Member	Federation of Nepalese Chambers of Commerce & Industry, Karnali
7	Tulshi Prasad Acharya	Officer	Ministry of Industry, Tourism, Forest and Environment
8	Niruta Koirala	Student	Shree Nera Ma. Vi
9	Surendra Rawat	Student	Yogi Naraharinath Study and Research Academy
10	Ashok Thapa	Guardian	Yogi Naraharinath Study and Research Academy
11	Suryanath Yogi	Campus Chief	Yogi Naraharinath Study and Research Academy
12	Dammar Kumari Rokaya	Section Officer	Barahatal Rural Municipality
13	Bhoj Prasad Lamsal	Unit Chief	Education Development and Co-ordination Unit, Surkhet
14	Dhirendra Prasad Sharma	Under Secretary	Birendranagar Municipality
15	Ganesh Kumar Neupane	Principal	Nepal Rastriya Secondary School, Surkhet
16	Prem Kumar Ramdam	Member	Nepal Rastriya Secondary School, Surkhet
17	Prem Bahadur Oli	Engineer	Ministry of Water Resource & Energy Development, Karnali Province, Surkhet
18	Padam Bahadur B.K.	Education Officer	Gurbakot Municipality, Surkhet
19	Gajendra Kumar G.C.	Education Officer	Bheriganga Municipality, Surkhet
20	Jeetendra Kumar Mahat	Vice Principal	Shree Janata Secondary School, Jumla
21	Jay Bahadur Bohara	Teacher	Shree Bhairab Secondary School, Narakot Sinja, Jumla
22	Rajendra Sharma	Chairman	Panchakoshi Technical School, Dailekh
23	Keshav Bahadur Bhandari	Principal	Vijaya Secondary School, Dullu, Dailekh

SN	Name	Designation	Organization
24	Madhav Bikram G.C	Principal	Tribhuwan Jan Secondary School, Luhaping, Salyan
26	Shiva Regmi	Principal	Sharada Secondary School Sankhamool, Salyan
27	Subarna Kumar Khadka	Section Officer	Human Resource Development Center
28	Lok Prasad Paudel	Section Officer	Education Directorate Direction, Surkhet
29	Ram Prasad Upadhyaya	Section Officer	Ministry of Social Development
30	Suwas Chandra Acharya	Under Secretary	Provincial Examination Management Office, Surkhet
31	Ramesh Khadka	Officer	Ministry of Land Management, Agriculture and Cooperatives, Karnali
32	Dhim Raj Jolmi Magar	Chairman	Ward Office-5, Barahaltal
33	Jaya Kumari Devkota	Head Teacher	Shree Panchadewal Secondary School, Kalikot
34	Nirmala Kumari Devkota	Care Taker (Jaya Kumari Devkota)	
35	Smiriti Pokhrel	Student	Shiva Secondary School, Latikoili
36	Tek Bahadur Nepali	Student	Shiva Secondary School, Latikoili
36	Bijaya Thapa	Student	Jana Model Secondary School
37	Brish Shahi	Health Division Chief	Ministry of Social Development, Surkhet

4.11 List of Workshop Participants in Sudurpashchim Province

मितिः २०७९।०४।०९ र १० गते **(July 25-26, 2022)**

SN	Name	Designation	Organization
1	Govinda Raj Bohara	Minister	Ministry of Social Development, Dhangadhi
2	Tek Bahadur Roka	State Minister	Ministry of Social Development, Dhangadhi
3	Kunti Joshi	Provincial Assembly	Provincial Assembly, Dhangadhi
4	Gelbu Singh Bohara	Provincial Assembly	Provincial Assembly, Dhangadhi
5	Deepak Lamichane	Secretary	Ministry of Social Development, Dhangadhi
6	Nanda Bahadur Saud	Provincial Assembly	Provincial Assembly, Dhangadhi
7	Dibyeshwori Shah	Provincial Assembly	Provincial Assembly, Dhangadhi
8	Narendra Bahadur Pal	Provincial Assembly	Provincial Assembly, Dhangadhi
9	Kanya Kala Kumari Rana	Dhangadhi Sub Metropolitan	Deputy-Mayor, Dhangadhi
10	Guliya Kumari Chaudhary	Ghodaghodi Municipality	Deputy-Mayor, Ghodaghodi
11	Birendra Bhatta	Godawari Municipality	Mayor, Godawari
12	Ram Lal Tharan	Tikapur Municipality	Deputy- Mayor, Tikapur
13	Suresh Kumar Joshi	Kathmandu	Center for Education and Human Resource Development
14	Lokendra Prasad Bhatta	Section Officer	Ministry of Social Development, Dhangadhi
15	Bhim Prasad Paneru	Officer- Education Training Centre	Education Training Centre, Dipayal
16	Dev Bahadur Bogati	Province Secretary	Far-west Province, Dhangadhi
17	Jaya Raj Pant	Unit Chief	Education Development and Coordination Unit, Darchula
18	Narendra Bahadur Khati	Under Secretary	Dhangadhi
19	Bishnu Raj Awasthi	Technical Assistant	Godawari Municipality, Dhangadhi
20	Dev Singh Dhami	Deputy Director	Council for Technical Education and Vocational Training, Dhangadhi
21	Janak Bahadur Rokaya	Technical Assistant	Education Development and Coordination Unit, Bajhang
22	Deepa Joshi	Technical Officer	Council for Technical Education and Vocational Training, Dhangadhi
23	Narendra Prasad Awasthi	Unit Chief	Education Development and Coordination Unit, Baitadi
24	Laxman Giri	Unit Chief	Education Development and Coordination Unit, Achham
25	Krishna Bahadur Bohara	Section Officer	Education Directorate Development, Dipayal
26	Prem Prasad Subedi	Principal	Pahalmansingh Higher Secondary School

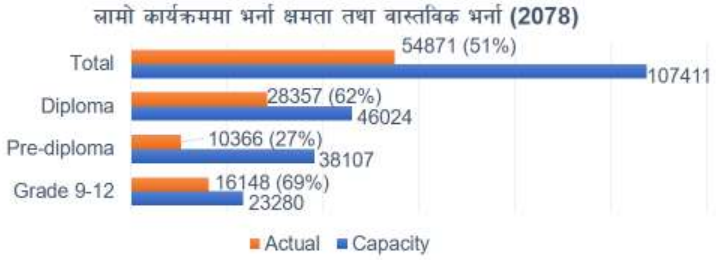
SN	Name	Designation	Organization
27	Prem Raj Pandey	Instructor	Bhimdatta Polytechnic Institute, Baitadi
28	Sabin Bhandari	Instructor	Shree Latinath Higher Secondary, Darchula
29	Pratap Singh Dhami	Section Officer	Education Development and Coordination Unit, Dhangadhi
30	Chet Bahadur Kathyat	Instructor	Shree Jalapa Devi Secondary School, Achham
31	Ganesh Bahadur Singh	Director	Education Directorate Development, Dipayal
32	Umesh Raj Regmi	Section Officer	Ghodaghodi Municipality
33	Hari Joshi	Secretary	Federation of Nepali Journalists
34	Surendra Singh Karki	Admin Officer	Dhangadhi Sub- Metropolitan
35	Ram Bahadur B.K.	Instructor	Dhangadhi Polytechnic Institute, Dhangadhi
36	Hemraj Joshi	Instructor	Dhangadhi Polytechnic Institute, Dhangadhi
37	Er. Bhupesh Upadhyaya	Instructor	Dhangadhi Polytechnic Institute, Dhangadhi
38	Bharat Bahadur Rawal	Assistant Technology	Shree Mangala Nepal Rastriya, Achham
39	Dipesh Sunar	Office Assistant	Ministry of Social Development, Dhangadhi
40	Bina Kumari Paudel	Technical Assistant	Tikapur Municipality, Dhangadhi
41	Bijaya Raj Ojha	Law officer	MOEFIT, Dhangadhi
42	Sher Bahadur Chaudhary	Principal	Shree Pahalmansingh Higher Secondary School, Dhangadhi
43	Dipak Bahadur Bohara	Teacher	Bhairav Secondary School, Bajhang
44	Rajendra Bahadur Singh	Principal	Shree Durga Bhawani Secondary School, Bajhang
45	Hari Prasad Joshi	Principal	Jana Bikash Secondary School, Darchula
46	Gagan Ayodi	Press	Sudurkhabar.com, Dhangadhi
47	Ramesh Datt Bag	Principal	Shree Manilek Secondary School, Baitadi
48	Deepak Bishwokarma	Student	Dhangadhi Polytechnic Institute, Dhangadhi
49	Dipesh Joshi	Student	Dhangadhi Polytechnic Institute, Dhangadhi
50	Pradeep Neupane	Student	Dhangadhi Polytechnic Institute, Dhangadhi
51	Deependra Joshi	Student	Dhangadhi Polytechnic Institute, Dhangadhi
52	Mrigyendra Singh	Student	Dhangadhi Polytechnic Institute, Dhangadhi
53	Yasodha Bithari	Student	Dhangadhi Polytechnic Institute, Dhangadhi

SN	Name	Designation	Organization
54	Bhim Chaudhary	Bureau Chief	Janata T.V, Dhangadhi
55	Anil Kumar Chaudhary	Student	Pahalmansingh H.S School, Dhangadhi
56	Rohit Chaudhary	Student	Pahalmansingh H.S School, Dhangadhi
57	Janaki Parki	Parents	Dhangadhi Polytechnic Institute, Dhangadhi
58	Balaram Chaudhary	Student	Pahalmansingh H.S School, Dhangadhi
59	Suman Chaudhary	Student	Dhangadhi Polytechnic Institute, Dhangadhi
60	Ram Bahadur K.C	Instructor	Dhangadhi Polytechnic Institute, Dhangadhi
61	Krishna Bahadur Parki	Student	Dhangadhi Polytechnic Institute, Dhangadhi
62	Deepak Bhandari	Section Officer	Ministry of Education, Science and Technology
63	Rajendra Raika	Personal Assistant	Ministry of Social Development
64	Bhim Bahadur Bogati	Driver	Education Development and Coordination Unit, Achham
65	Gagan Singh Dhami	Driver	Education Development and Coordination Unit, Darchula
66	Rajib Chaudhary	Driver	Ministry of Social Development
67	Prem Bahadur Diyal	Driver	Education Directorate Development, Dipayal
68	Jeevan Chaudhary	Driver	Tikapur Municipality, Dhangadhi
69	Dil Bahadur Ayer	Driver	Godawari Municipality, Dhangadhi
70	Shyam Lal Chaudhary	Personal Security Officer	Ministry of Social Development, Dhangadhi
71	Prakash Bohara	Personal Security Officer	Ministry of Social Development, Dhangadhi
72	Basanta Janak Saud	Personal Security Officer	Ministry of Social Development, Dhangadhi
73	Shiv Raj Bohara	Personal Assistant	Ministry of Social Development, Dhangadhi
74	Tek Raj Pangleya	Personal Assistant	Ministry of Social Development, Dhangadhi
75	Bhawani Singh Mandal	Personal Security Officer	Ministry of Social Development, Dhangadhi
76	Suresh Baniya	Personal Assistant	Dhangadhi Sub Metro Politian, Dhangadhi
77	Janak Saud	Personal Security Officer	Ministry of Social Development

Annex 5: Slides for consultation with Business and Industry stakeholders

प्राविधिक तथा व्यावसायिक शिक्षा क्षेत्रमा केही उल्लेखनिय उपलब्धीहरु

- नेपाल सरकारको उद्देश्य तथा जोड
- प्राविधिक तथा व्यावसायिक शिक्षाका संस्थागत संरचना
  - ❖ संघिय मन्त्रालयहरु: शिक्षा, श्रम, उद्योग, पर्यटन, कृषि, महीला
  - ❖ प्रदेश मन्त्रालयहरु: शिक्षा, उद्योग, पर्यटन, कृषि संग सम्बन्धित
  - ❖ स्थानिय तह
- **For TVET learners/trainees/graduates:**
  - **Business and industry/ economic sectors the Biggest Training School in Nepal**
  - **Business and Industry/ economic sectors important source for OJT opportunities**
  - **Business and industry/ economic sectors, probably the biggest employer (wage, self/ entrepreneur)**



छोटा अवधिका प्रदायक:

- शिक्षा मन्त्रालय, सिटिईभिटि: १३५५
- अन्य मन्त्रालय

तर मुख्यत:

- **Graduates are not industry-ready**
- छोटा अवधिका तालिम तह १ केन्द्रित एकल **(Stand alone training)** कार्यक्रम
- तथा ठुला ऋण तर प्रतिफल प्रति गुनासो

वार्षिक अनमानित २० अर्ब भन्दा बढी लगानिको परिणामरु

भर्ना दर: **51%**

चक्र पुरा दर: **47%**

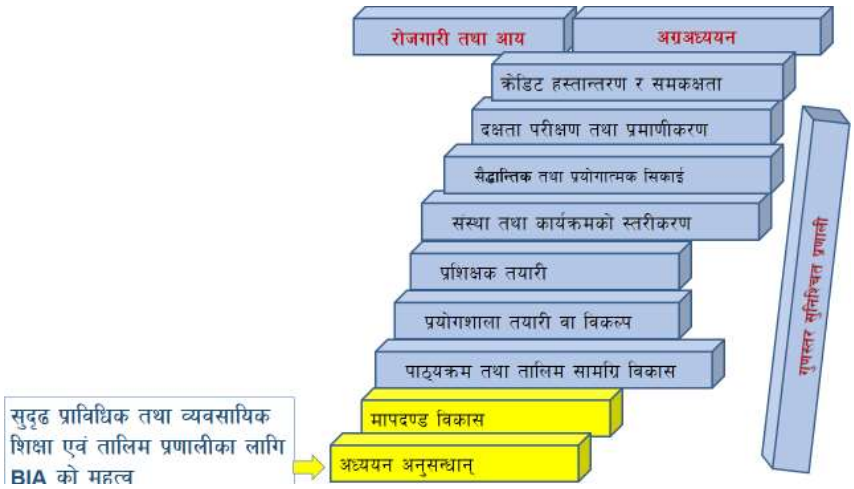
रोजगारी दर: **49%**

छोटा अवधिका तालिमको तथ्याक ?

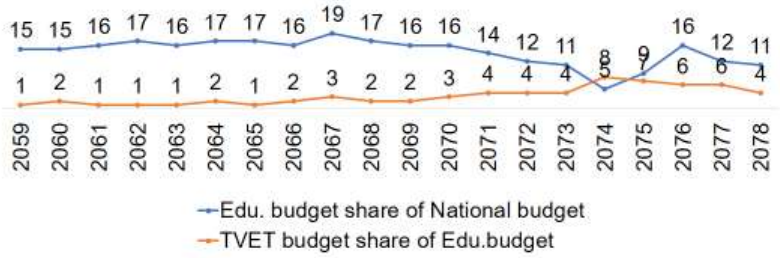
आत्मसन्तुष्ट प्राविधिक तथा व्यवसायिक शिक्षा प्रणाली

उद्योग व्यवसायको समुचित संलग्नता

संरचना	हालको सदस्य संख्या	उद्योग व्यवसायका प्रतिशत
सिटिईभिटि सभा	23	4 (17%)
सिटिईभिटि परिषद	9	0 (0%)
राष्ट्रिय सीप परीक्षण समिति	16	8 (50%)
विषय क्षेत्र सीप समिति		>90%
शिक्षालय व्यवस्थापन समिति	9	1 to 2 (11%)
शिक्षा तथा मानव श्रोत विकास केन्द्र	?	



सम्पूर्ण शिक्षा क्षेत्रको तुलनामा TVET क्षेत्रको वजेट



यस आधार अध्ययनले उव्जाएका प्रश्नहरु:

- प्राविधिक शिक्षा प्रणालीका योग्यता र उद्योग व्यवसायमा आवश्यक जनशक्तिको दक्षता तथा संख्या विच सामंजस्य मिलाउन के गर्न पर्ला ? साथै भरपर्दो जनशक्ति प्रक्षेपण कसरी गर्न सकिएला ?
- उद्योग व्यवसायमा आवश्यक जनशक्तिको दक्षता तथा संख्या **(Labor market information – LMIS)** लाई प्राविधिक शिक्षा प्रणालीसंग जोड्न के गर्न पर्ला ?
- प्राविधिक शिक्षा प्रणालीका मापदण्ड तथा पाठ्यक्रम तयार गर्ने क्रममा उद्योग व्यवसायको तर्फबाट श्रोत व्यक्ति उपलब्ध गर्न के व्यवस्था गर्नु पर्ला ?
- प्राविधिक तथा व्यावसायिक शिक्षालाई खासगरी छोटो अवधिको तालीमलाई उद्योग व्यवसाय तथा आर्थिक क्षेत्रको माग अनुशार हुने गरी जोड्नको निमित्त के गर्न पर्ला ?
- प्रभावकारी र नतिजामुखी प्राविधिक तथा व्यावसायिक शिक्षा कार्यान्वयनको लागि संघ, प्रदेश र स्थानिय तहले सम्पादन गर्ने कार्य अनुरुप कस्तो संस्थागत संरचना उपयोगी हुन सक्छ ?

यस आधार अध्ययनले उव्जाएका प्रश्नहरु...

- **TVET** अध्ययन गरका व्यक्तिहरुको रोजगारी र सान्दर्भिकता कसरी बढाउन सकिन्छ ?
- **TVET** क्षेत्रमा भएको खण्डीकरण समस्यालाई कसरी सम्बोधन गर्न सकिएला ?
- नेपालको सन्दर्भमा प्राविधिक शिक्षाको उद्देश्य के भएको देखिन्छ र के हुनपर्ला ?
  - उच्च अध्ययनको निमित्त
  - रोजगारीको लागि तथा स्थानिय तहको आवश्यकता पूर्ती गर्न

साँचो अर्थमा

उद्योग व्यवसाय तथा समग्र आर्थिक क्षेत्रलाई उपयोगि जनशक्ति तयार गर्न

उद्योग व्यवसाय र **TVET** प्रणाली विच कस्तो सहकार्य गर्नु पर्ला ?

प्राविधिक तथा व्यावसायिक शिक्षा एवं तालिमका केही सिद्धान्तहरु

१. सान्दर्भिक
   - रोजगार बजार सान्दर्भिक (Employment First)
   - यस सम्बन्धि सबै कार्यहरु तथा प्रयासहरु रोजगार उन्मुख
   - उद्योग व्यवसाय तथा आर्थिक क्षेत्रसंग उत्पादनशिल सहकार्य
   - शैक्षिक योग्यता

२. पहुंच

३. मापदण्डमा आधारीत पाठ्क्रम तथा सिकाई वातावरण (Competence standards based curriculum and learning environment)

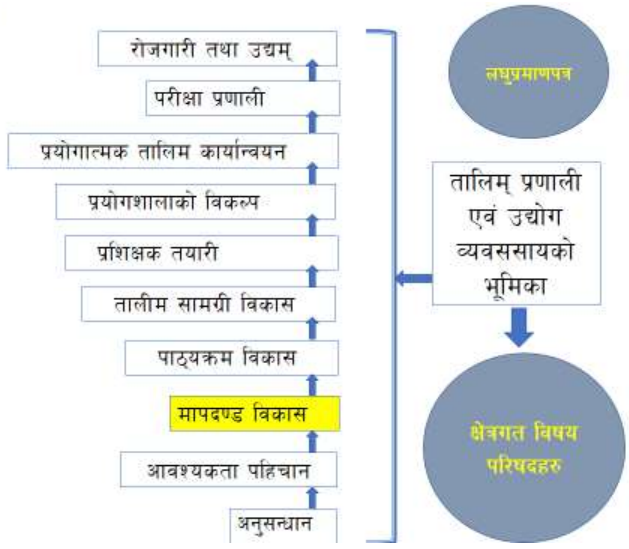
४. गुणस्तर सुनिश्चितता

५. दिगो लगानी

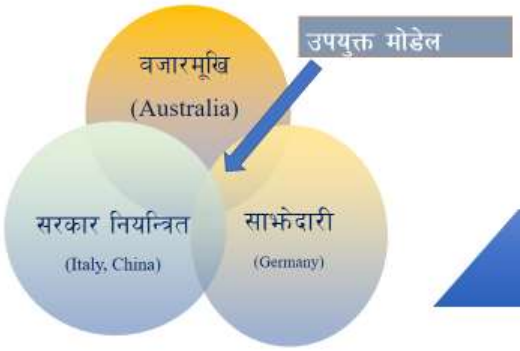
Sources:
1. Loose 2015; 2. MacDonald, Stephen; Nink, Carl; Duggan, Stephen) In https://www.voced.edu.au dated 30 July 22

प्राविधिक तथा व्यावसायिक शिक्षा क्षेत्र सुधारका केहि उपायहरु

प्राविधिक तथा व्यावससायिक शिक्षालाई अन्तर्राष्ट्रिय सिद्धान्त तथा सफल अभ्यासमा कार्यान्वयन गर्ने



व्यावसायिक शिक्षा एवं तालीम सम्बन्धि अन्तर्राष्ट्रिय मोडेलहरु



उद्योग व्यवसायसंग समन्वय: विभिन्न देशहरुवाट सिकाई

Macro and Meso तहमा सार्वजनिक नीजि साझेदारी

संरचना	लगानीको श्रोत	देशहरु
उच्च TVET स्वायत्त संस्था (Apex TVET Autonomous Body with range of BIA participation)	सरकार तथा दातृ निकाय	देशहरु
विषय क्षेत्र सीप परिषद (Sector Skills Councils)	सरकार तथा निजी क्षेत्र	धेरै देशहरु, नेपाल अनुभव
निजी क्षेत्रको व्यवस्थापनमा व्यवसायिक सीप विकास परिषद	तालिमवाट प्राप्त आम्दानी	पाकिस्तान
उद्योग व्यवसाय सम्मिलित HRD Council	सरकार तथा निजी क्षेत्र	मलेशिया

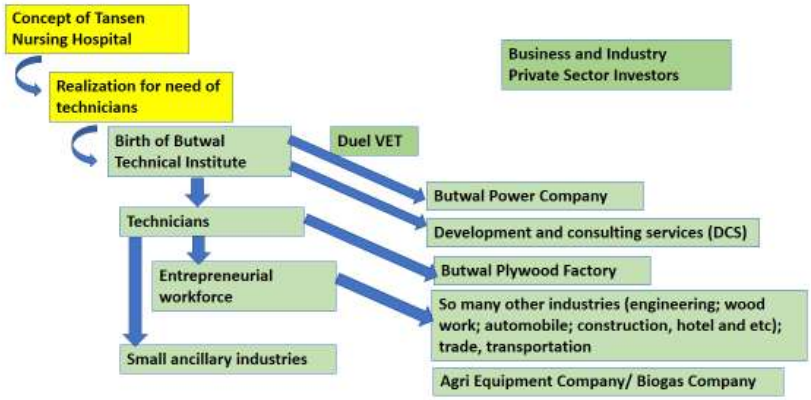
शिक्षालय तहमा सार्वजनिक नीजि साझेदारी

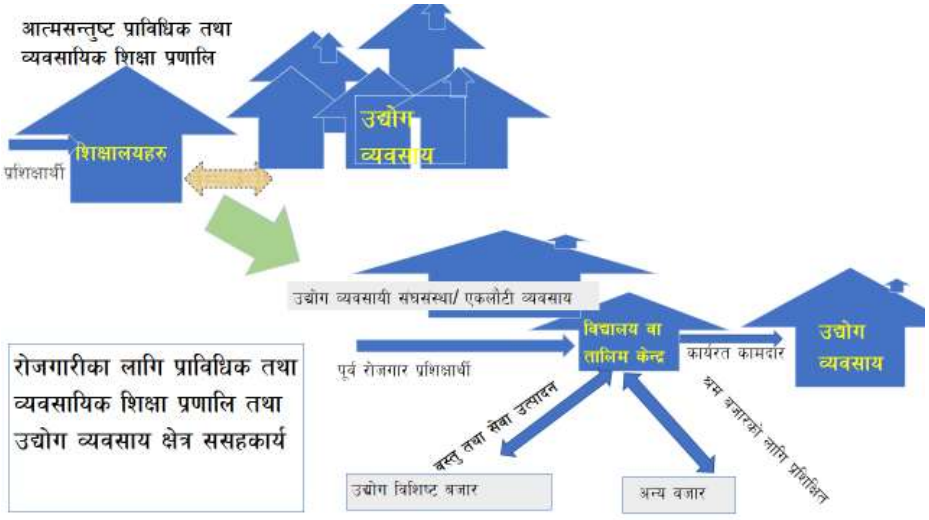
संरचना	लगानीको श्रोत	देशहरु
शिक्षालय व्यवस्थापन समिति वा वोर्ड	सरकार	पाकिस्तान, नेपाल
अर्ध स्वायत्त शिक्षालय	फि तथा सरकारी, पालिका तथा दातृसंस्था अनुदान	तानसेन नर्सिगं स्कुल
शिक्षालय व्यवस्थापन कन्ट्याक्ट	सरकार तथा निजी क्षेत्र	पाकिस्तान,
निजी शिक्षालय	फि, sponsored training, परिणाममूखि सरकारी, पालिका तथा दातृसंस्था अनुदान	पाकिस्तान, वंगलादेश, भारत India Nepal/ UK and US
Enterprise Advisory and Partnership Committee (EAPC)	सरकार तथा निजी क्षेत्र	नेपाल

कार्यान्वयन तहमा सार्वजनिक नीजि साझेदारी मोडेलहरु

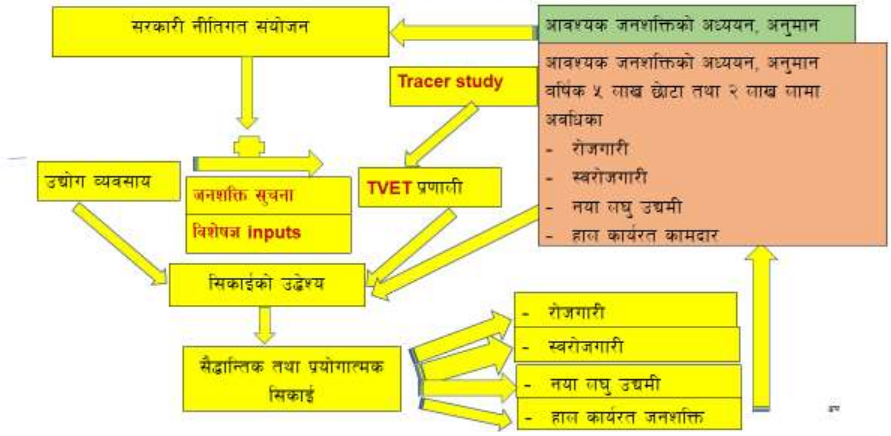
मोडेलहरु	देशहरु	रोजगारीको संभावना
शिक्षालय कार्यस्थलमा आधारीत तालिम (OJT) model	नेपाल, many countries	मध्यम
उद्योगसंग जोडिएका कार्यक्रम	भारत (ITC, TTC)	उच्च
सम्पूर्ण रुपमा उद्योगमा संचालित कार्यक्रम	पाकिस्तान,	उच्च
Dual VET#	Mainly जर्मनी	उच्च
Cooperative vocational training (CVT)	पाकिस्तान,	
Apprenticeship (and Employment (AE) model)	Many countries, Swiss	उच्च
फिल्डमा आधारित कार्यक्रम	पाकिस्तान, तान्जानिया	स्वरोजगार, उद्यमी
Training Hotel/Factory Model	पाकिस्तान, नेपाल (?)	मध्यम
Production/ Outlet Model	पाकिस्तान	
Space Sharing model	पाकिस्तान	

TVET, उद्योग व्यवसाय तथा विकास विच अन्योन्याश्रित सम्बन्ध **symbiotic relationship** वुटवल टेक्निकल इन्स्टिच्यूटको उदाहरण





TVET क्षेत्रको योजना प्रक्रियामा पून विचारको आवश्यकता
Rethinking for Relevance – Reversing TVET planning



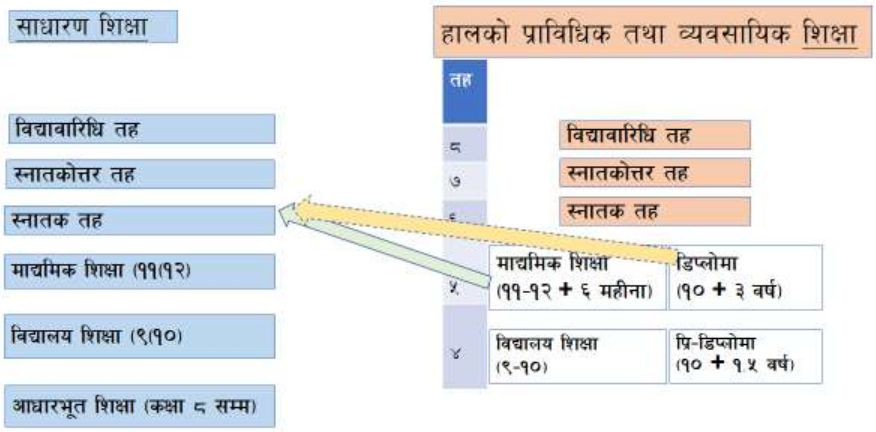
उद्योग व्यवसायको समुचित संलग्नता

संरचना	हालको सदस्य संख्या	उद्योग व्यवसायका प्रतिशत	उद्योग व्यवसायका प्रस्तावित प्रतिशत
सिटिईभिटि सभा	23	4 (17%)	12 (50%)
सिटिईभिटि परिषद	9	0 (0%)	4 (50%)
राष्ट्रिय सीप परीक्षण समिति	16	8 (50%)	8 (50%)
विषय क्षेत्र सीप समिति		>90%	Maintain it
शिक्षालय व्यवस्थापन समिति	9	1 to 2 (11%)	4 (50%)
शिक्षा तथा मानव श्रोत विकास केन्द्र	?		

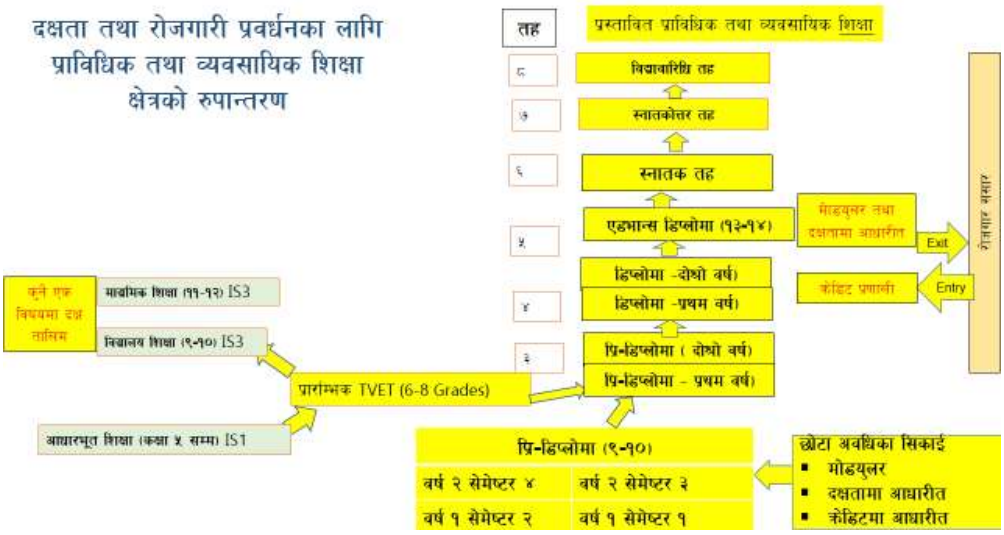
विषय क्षेत्र सीप समिति वा अन्य नाम

- स्वायत्त संस्थाको रुपमा दर्ता

साधारण तथा प्राविधिक तथा व्यवसायिक शिक्षा क्षेत्रको अवस्था



दक्षता तथा रोजगारी प्रवर्धनका लागि: प्राविधिक तथा व्यवसायिक शिक्षा क्षेत्रको रुपान्तरण



संभावित अन्तर्निहीत प्रश्नहरु

- उद्योग व्यवसायले जनशक्ति तयार गरि देश विकासमा यतिका योगदान दिएको छ भने सरकारले किन उपयुक्त वातावरण तयार नगरेको होला ?

- सरकारले रोजगारी तथा उद्योग व्यवसायको लागि यतिका व्यवस्था गरेको छ। किन उद्योग व्यवसायले उपयुक्त सहयोग नगरेको होला ?

सहभागिहरुवाट आशा गरिएका सुझावका क्षेत्रहरु

- नेपालको उद्योगको स्वरुप अनुशार कस्तो खालको सीपको आवश्यकता देख्नुहुन्छ ?
- नेपालबाट उत्पादित प्राविधिक (दक्ष) जनशक्तिलाई स्वदेशको उद्योगमा आकर्षण गर्न उद्योगीहरुको तर्फबाट के कस्तो प्रयासहरु भएको छ ?
- नेपालका प्राविधिक शिक्षालयमा पठनपाठन हुने पाठ्यक्रमलाई उद्योगको आवश्यकता संग जोड्नको निमित्त के गर्नु पर्ने हुन्छ ?
- नेपालको उद्योगहरुका निमित्त माथिल्लो तहको सीप भएका जस्तैः सीप तह ५, ६ ,७ जस्ता दक्ष जनशक्तिको आवश्यकता कत्तिको छ ?
- प्राविधिक शिक्षा र उद्योगलाई जोड्नको निमित्त नीतिगत तहमा के कस्तो सुधारहरु आवश्यक छ ?

Annex 6: Slides for consultation with other stakeholders

प्रस्तुतिको उद्देश्य:

- प्राविधिक तथा व्यावसायिक शिक्षा क्षेत्र विश्लेषण अध्ययन **(TVET Sector Analyses)** को केहि तथ्याक तथा यस आधार अध्ययनले उब्जाएका प्रश्नहरू: तथा
- प्राविधिक तथा व्यावसायिक शिक्षा क्षेत्र सुधार योजना **(TRSP)** का लागि प्रस्तावित केही उपायहरु

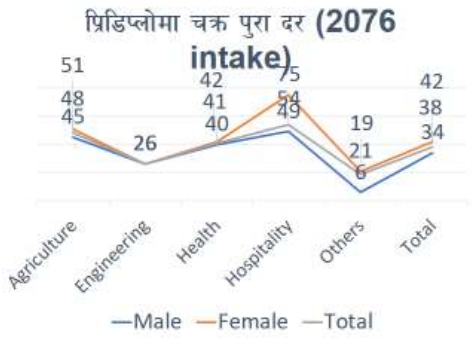
प्राविधिक तथा व्यावससायिक शिक्षा क्षेत्रमा केही उल्लेखनीय उपलब्धिहरु

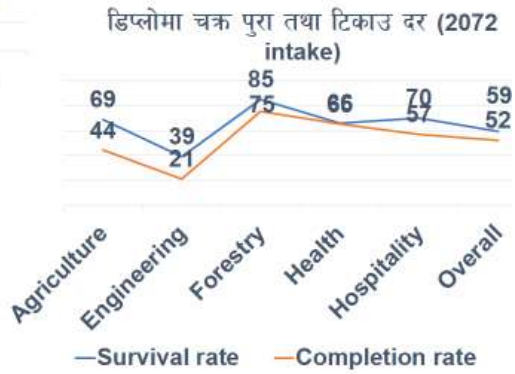
- नेपाल सरकारको उद्देश्य तथा जोड
- प्राविधिक तथा व्यावसायिक शिक्षाका संस्थागन संरचना
  - संघिय मन्त्रालयहरू: शिक्षा, श्रम, उद्योग, पर्यटन, कृषि, महीला
  - प्रदेश मन्त्रालयहरू: शिक्षा, उद्योग, पर्यटन, कृषि संग सम्बन्धित
  - स्थानिय तह

शिक्षालय र विद्यालय विस्तार **(2073-2078)**

छोटा अवधिका प्रदायक:
शिक्षा मन्त्रालय, सिटिईभिटि: १३५५
अन्य मन्त्रालय

लामो कार्यक्रममा भर्ना क्षमता तथा वास्तविक भर्ना **(2078)**





विद्यार्थिले सिसकाई छाड्ने दर, 2078

Grades with dropout	Technical stream	Pre- Diploma	Diploma
Dropout in Grade 10	14.5	-	-
Dropout in Grade 11	21.7	-	-
Dropout in Grade 12	38.8		-
Dropout in Pre-Diploma	-	0.1	
Dropout in Diploma	-	-	0.8

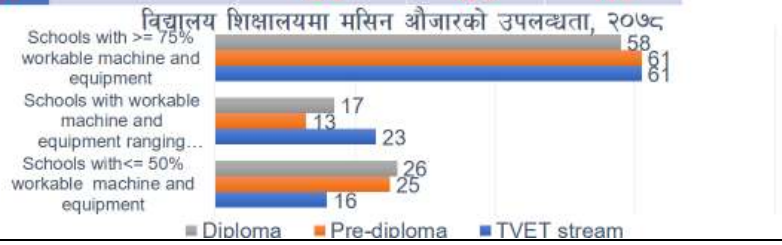
डिप्लोमा टिकाउ दर
(Survival rate to Grade 12)

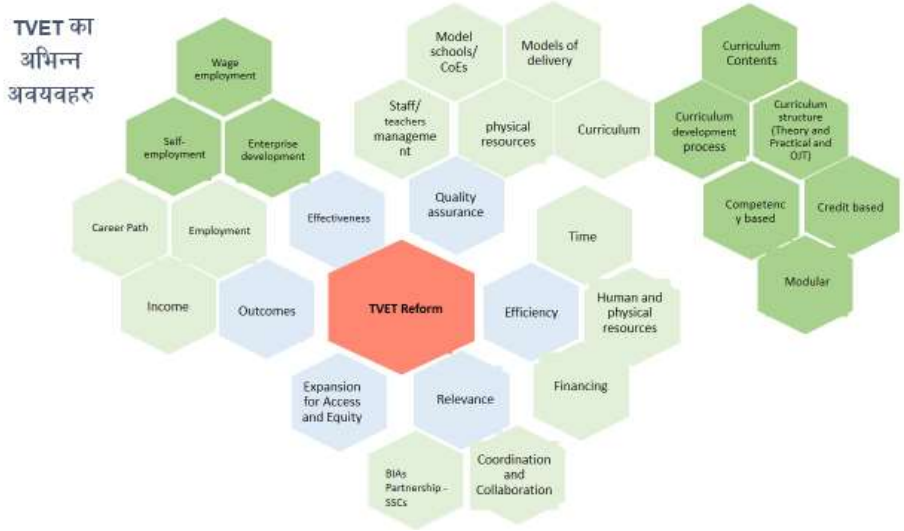
Gender	Survival Rate
Girls	62.6
Boys	53.9
Overall	57.9

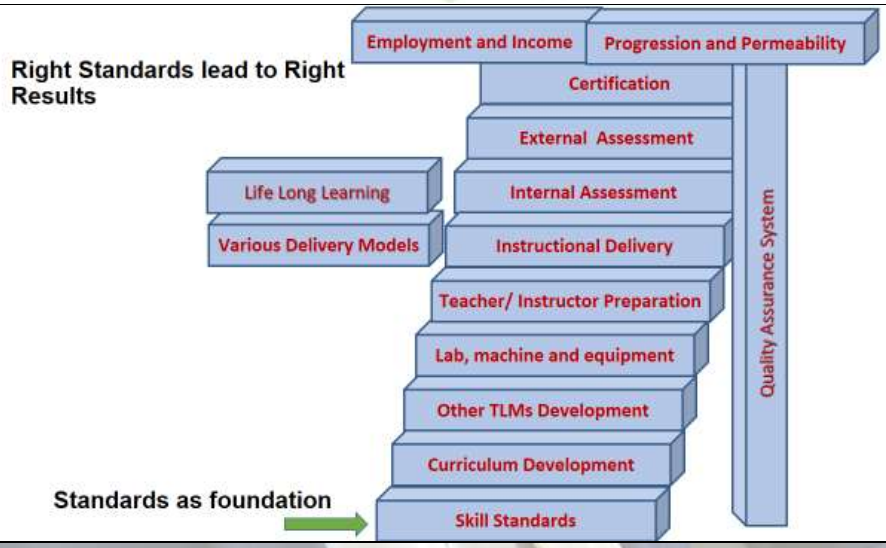
लगानिको परिणामहरु

२०७३ पछि परिमार्जित पाठ्यक्रमहरु

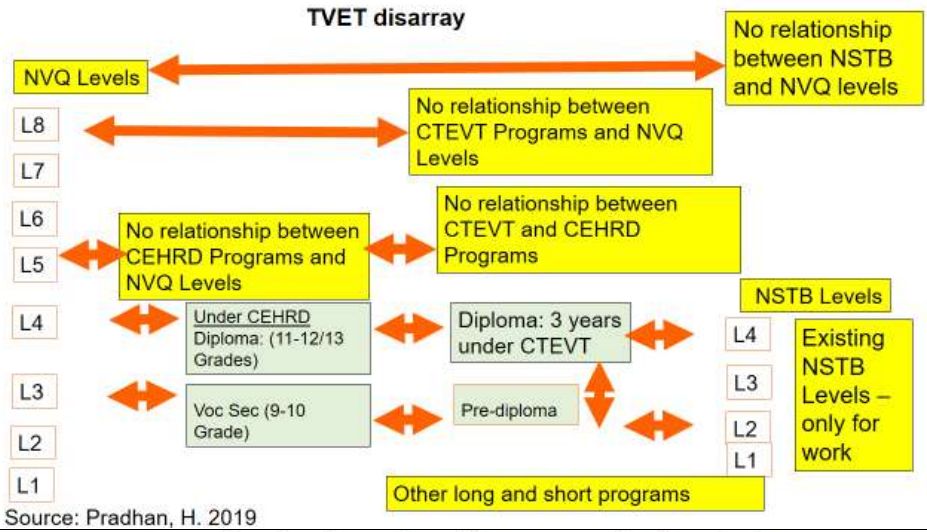
Sectors	Technical stream	Pre-Diploma	Diploma	Short term
Agriculture	2		4	13
Engineering	3	3	9	34
Health			11	1
Hospitality		1	1	15
Forestry		1	1	1
Music	1			
Others		1	2	16
Total (after)	6 (100%)	6 (18%)	28 (57%)	80 (30%)
Prepared before		72%	43%	70%




TVET का अभिन्न अवयवहरु
Wage employment
Self-employment
Enterprise development
Career Path
Employment
Income
Outcomes
Effectiveness
Quality assurance
Model schools/ CoEs
Models of delivery
Staff/ teachers management
physical resources
Curriculum
Curriculum Contents
Curriculum development process
Curriculum structure (Theory and Practical and OJT)
Competency based
Credit based
Modular
Time
Human and physical resources
Financing
TVET Reform
Efficiency
Expansion for Access and Equity
Relevance
BIAs Partnership - SSCs
Coordination and Collaboration

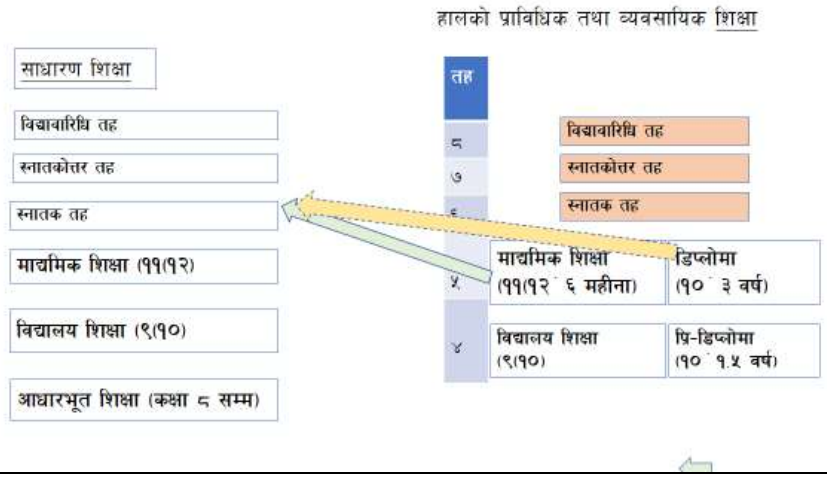

Right Standards lead to Right Results
Employment and Income
Progression and Permeability
Certification
External Assessment
Life Long Learning
Internal Assessment
Various Delivery Models
Instructional Delivery
Teacher/ Instructor Preparation
Lab, machine and equipment
Other TLMs Development
Curriculum Development
Skill Standards
Quality Assurance System
Standards as foundation

Life Long Learning
Progression and Permeability
Various Delivery Models
Curriculum Development
Occupational Skill Standar
Other TLMs Development
Employment and Income
Certification
Instructional Delivery
External Assess
Quality Assurance System
NVQS operationalization could be solution

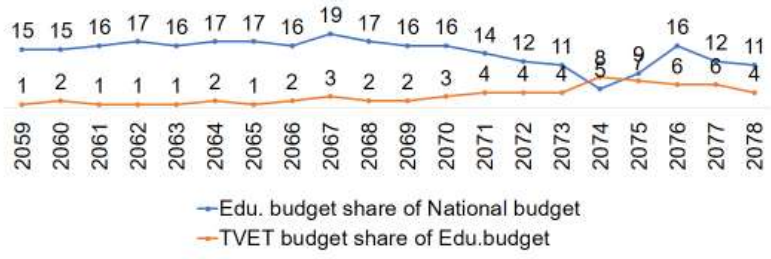


Source: Pradhan, H. 2019

दक्षता तथा रोजगारी प्रवर्धनका लागि: प्राविधिक तथा व्यवसायिक शिक्षा क्षेत्रको रुपान्तरण



सम्पूर्ण शिक्षा क्षेत्रको तुलनामा **TVET** क्षेत्रको बजेट



यस आधार अध्ययनले उब्जाएका प्रश्नहरू:

- नेपालमा TVET को उद्देश्यहरू कसरी स्पष्ट गर्ने?
  - रोजगारीको लागि: स्थानीय, राष्ट्रिय तथा अर्न्तराष्ट्रिय
  - शैक्षिक योग्यताका लागि
  - दुबै
- अवस्थित नामांकन स्थानहरूको (Enrolment) उपयोग कसरी बढाउने?
- ह्यलको तहभन्दा माथि (Vertical expansion) तथा क्षितिजिकरण (Horizontal expansion) मा केन्द्रित अध्ययनका विषयवस्तुहरु कससरी विस्तार गर्ने?
- कम्तिमा ३ महीना अवधिका तालिमलाई कसरी सान्दर्भिक बनाउने ?

सयस आधार अध्ययनले उब्जाएका प्रश्नहरु...

- TVET अध्ययन गरेका व्यक्तिहरुको रोजगारी/सान्दर्भिकता कसरी बढाउने?
- TVET क्षेत्रमा भएको खण्डीकरण समस्यालाई कसरी सम्बोधन गर्ने?
- संघिय, प्रदेश तथा स्थानीय तहमा TVET संस्थाहरू कसरी व्यवस्थित गर्ने?
- विद्यालयका लागि आवश्यक बजेट कससरी सुनिश्चित गर्ने ?
- प्राविधिक धारलाइ कसरी वास्तविक निःशुल्क बनाउने?
- दीर्घकालीन TVET कार्यक्रमहरूमा बाह्य विकास साझेदारहरूको कोष सही अर्थमा कसरी वृद्धि गर्ने?

यस शिक्षालाई कसरी साँचो अर्थमा

'गरी खाने शिक्षा'

वनाउने ?

प्राविधिक तथा व्यावसायिक शिक्षा क्षेत्र सुधारका केही उपायहरु

- प्राविधिक तथा व्यावसायिक शिक्षालाई अन्तर्राष्ट्रिय सिद्धान्त तथा सफल अभ्यासमा कार्यान्वयन गर्ने र तत्अनुरुप,
- प्राविधिक तथा व्यावसायिक शिक्षालाई नेपाल सरकारले तयार गरेको राष्ट्रिय व्यावसायिक योग्यता प्रणालि **(National Vocational Qualification Framework)** का आधारमा विकास गर्ने

प्राविधिक तथा व्यावसायिक शिक्षा एवं तालिमका केही सिद्धान्तहरु

१. सान्दर्भिक
  - रोजगार वजार सान्दर्भिक **(Employment First)**
    - यस सम्बन्धि सवै कार्यहरु तथा प्रयासहरु रोजगार उन्मुख
    - उद्योग व्यवसाय तथा आर्थिक क्षेत्रसंग उत्पादनशिल सहकार्य
  - शैक्षिक योग्यता

२. पहुंच

३. मापदण्ड आधारीत पाठ्क्रम तथा सिकाई वातावरण **(Competence standards based curriculum and learning environment)**

४. गुणस्तर सुनिश्चितता

५. दिगो लगानी

- **Sources:**
- **1. Loose 2015; 2. MacDonald, Stephen; Nink, Carl; Duggan, Stephen)**
- **In https://www.voced.edu.au dated 30 July 22**

राष्ट्रिय व्यावससायिक योग्यता प्रणालि **(NVQF)** ले कसरी सहयोग गर्छ

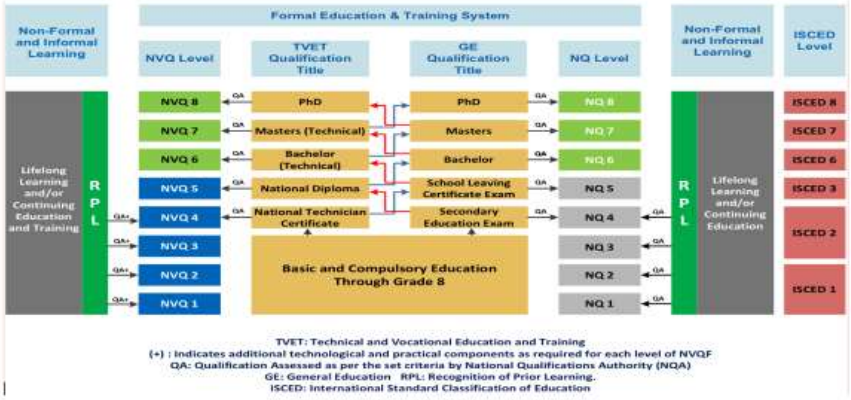
- नेपाल सरकारले तयार गरेको राष्ट्रिय व्यावसायिक योग्यता प्रणालि **(NVQF)** का महत्वपर्ण व्यवस्थाहरु
- तह १ देखि तह ८ सम्मको व्यवस्था
- हरेक तहमा अन्तर्राष्ट्रिय अभ्यास अनसार तह निधारक **(Level Descriptors)** को व्यवस्था
- हरेक तहमा अन्तर्राष्ट्रिय अभ्यास अनुसार तह सिकाई परिणाम **(Learning Outcomes)** को निर्धारण, फलस्वरुप
  - एउटै मापदण्ड तथा एउटै पाठ्यक्रम
  - एउटै योग्यताका प्रमाणपत्र तथा मान्यता
- यस्ता तह निर्धारक **(Level Descriptors)** तथा सिकाई परिणाम **(Learning Outcomes)** लाई उस्तै तह भएका राष्ट्रिय व्यावसायिक योग्यता प्रणालि **(NVQF)** लागु गरेका देशहरुले ग्राजुएटको प्रमाणपत्र मान्यता दिने सम्भावना हुन्छ
- यस व्यवस्थाले स्थानीय, प्रदेश, राष्ट्रिय अन्तर्राष्ट्रिय रोजगार वजारमा रोजगारीको संभावना वढाउंछ

राष्ट्रिय व्यावसायिक योग्यता प्रणालि (NVQF) ले कसरी सहयोग गर्छ..

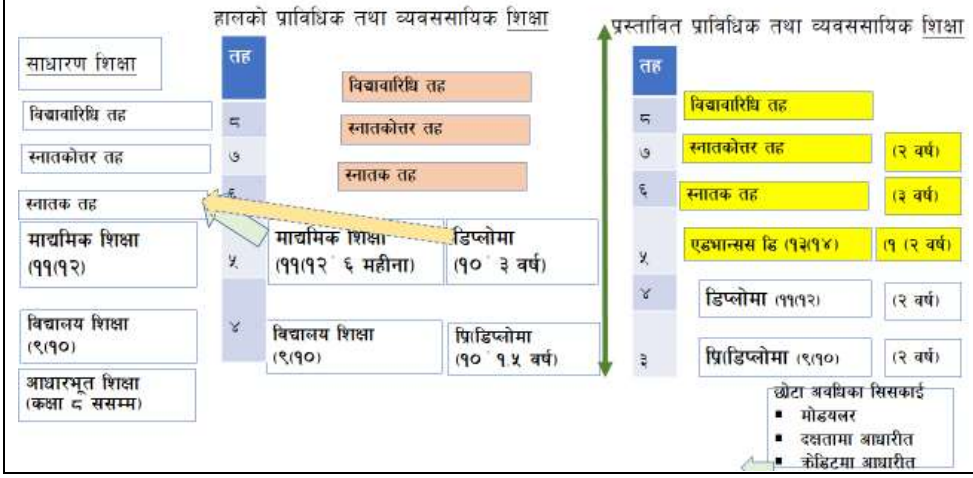
साथै

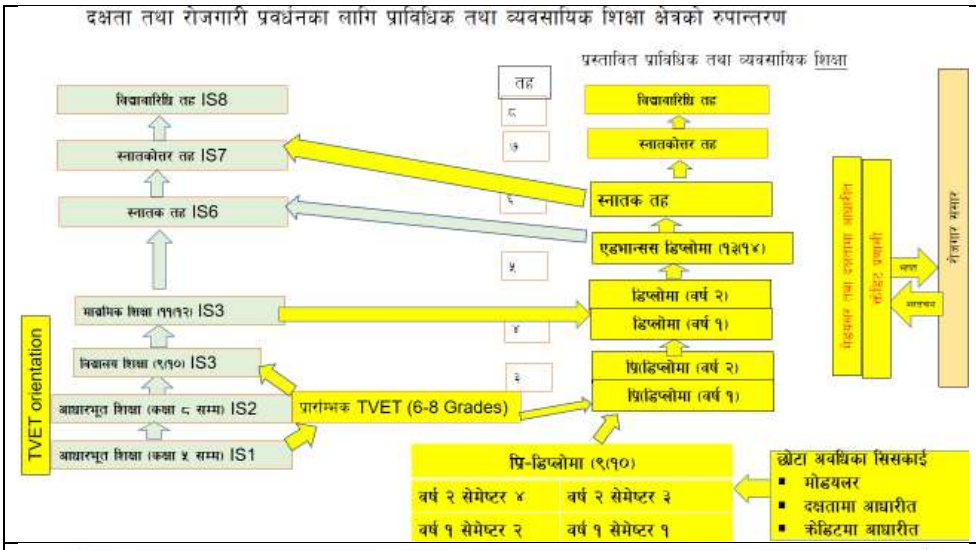
- ग्राजुएटलाई उच्च अध्ययन तथा साधारण शिक्षा तर्फ मार्ग प्रसस्त गर्छ
- छोटा अवधि वा अनौपचारीक क्षेत्रमा सिकेका दक्षतालाई औपचारीक मान्यता मार्फत अग्र अध्ययन तथा साधारण शिक्षा तर्फ जान मार्ग प्रससस्त गर्छ
- फलस्वरुप कुनै योग्यताका लागि आवश्यक पर्ने पुरै समय खर्च गर्नको सट्टा क्रेडिट व्यवस्थापन मार्फत आंशिक योग्यता मार्फत आफ्नो सुविधा अनुसार अग्र अध्ययन मार्ग प्रसस्त गर्छ

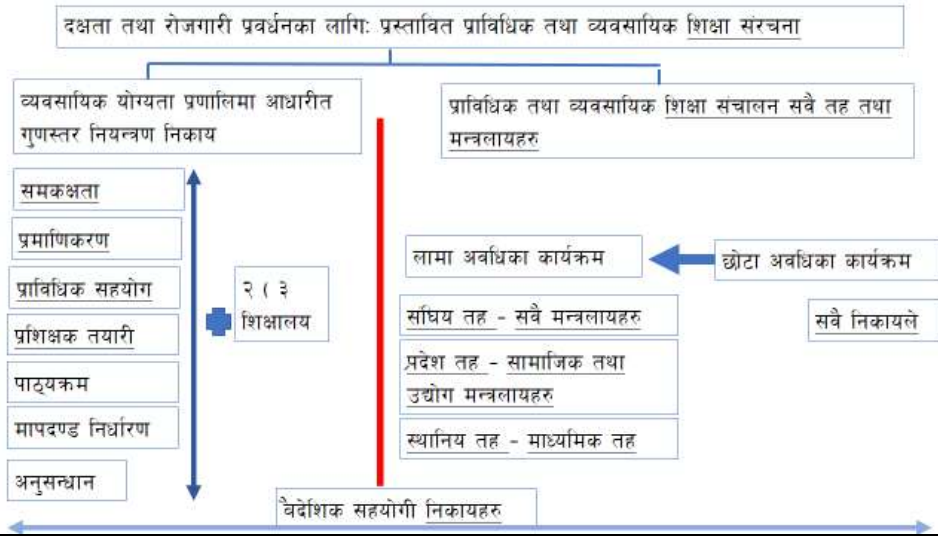
नेपाल ससरकारलेवाट तयार राष्ट्रिय व्यावससायिक योग्यता प्रणालि



दक्षता तथा रोजगारी प्रवर्धनका लागि: प्राविधिक तथा व्यवससायिक शिक्षा क्षेत्रको रुपान्तरण







सुधारका सन्दर्भमा केहि मार्गदर्शक विषय वस्तुहरु:

- सुधार उन्मुख गरिखाने शिक्षा
  - स्वदेशि तथा अन्तराष्ट्रिय रोजगारी
- संविधान तथा योजनाहरुमा भएका व्यवस्था
- शैक्षिक संरचनामा परिवर्तन
  - मोड्युलर, दक्षतामा आधारीत, क्रेडिटमा आधारीत
  - बहुर्वाहिर्गमन तथा आगमन (multi exit/ entry)
  - छोटा अवधिका तालिम लामो अवधिको अध्ययनको अंश
- राष्ट्रिय व्यवसायिक योग्यता प्रणालिमा आधारीत
- हालको उपलब्धि कायम गर्ने
  - संस्थागत अनुभव तथा विशेषज्ञता
  - हालको जनशक्ति अनुभव तथा विशेषज्ञता

सहभागिहरुवाट आशा गरिएका सरोकारहरु

- नेपालको सन्दर्भमा प्राविधिक शिक्षाको उद्देश्य के भएको देखिन्छ र के हुनु पर्दछ ?
- रोजगारीको लागि तथा स्थानिय तहको आवश्यकता पूर्ती गर्ने
- उच्च अध्ययनको निमित्त
- हाल संसञ्चालनमा रहेका प्राविधिक शिक्षालय/विद्यालयमा भर्नाको संख्या (Enrolment) बढाई हाल उपलब्ध सिससटहरुको अधिकतम उपयोग कसरी बढाउने?
- लक्ष्य स्विकृत भएको ससससन्दर्भमा माथिल्लो तहमा अध्ययन गर्न पाउने अवससर (Vertical expansion) र समानस्तरका अन्य विषय अध्ययन गर्न पाउने अवसर (Horizontal expansion) लाई विस्तार गर्न के कस्तो नितिगत व्यवस्था गर्नु पर्ने हुन्छ ?
- प्राविधिक तथा व्यावसायिक शिक्षालाई खासगरी छोटो अवधिको तालीमलाई बजार र उद्योगको माग अनुशार हुने गरी जोड्नको निमित्त हाल स्विकृत NVQ मा कुनै सशोधन (परिमार्जन) आवश्यक हुन्छ कि हुदैन र यो व्यवस्थासंग उद्योगलाई प्रभावकारी ढगले जोड्नको निमित्त के गर्नु पर्दछ ?
- समावेशीता र पहुचको उचित कार्यान्वयनको लागि के गुर्न पर्ने हुन्छ ?
- प्रभावकारी र नतिजामुखी प्राविधिक तथा व्यावसायिक शिक्षा कार्यान्वयनको लागि स्सघ, प्रदेश र स्थानिय तहले सम्पादन गर्ने कार्य अनुरुप कस्तो सस्थागत सरचना उपयोगी हुन सक्छ ?

Annex 7: Workshop Technical Discussion and Stakeholder's Input
Sudurpaschim Province (25 & 26 July, 2022)

Access, Equity and Expansion

Some suggestions to increase access of students in technical stream:

- The quota system imposed on some technical education should be removed.
- Technical education should be made accessible to all, wide publicity about technical education should be done by state, province and union.
- Allowing schools to open without adequate physical infrastructure.
- Make technical education completely free and practical
- Programs of CTEVT and CEHRD should be made one.
- Students who have acquired technical education at the lower level should be arranged to study at the higher level as well.
- Technical education should be made of international standard.
- Based on geography and community needs, everyone can have equal access only if the technical education program is flexible, simple, stable, collaborative, decentralized.
- Learning, earning and re-learning environment should be arranged.
- The subsistence allowance given to students should be increased.
- Emphasis should be placed on making arrangements for class students. Opening a technical school with residential facilities on the basis of geography and needs
- Employment should be ensured in coordination with various industries and employers.
- The range of technical subjects should be expanded.
- Equality should be brought to you. Adjust according to preferences.

Challenges:

- Technical education being expensive and costly.
- Centralization of institutes
- Lack of knowledge about the importance of technical education among common parents.
- Lack of job security for students who have received technical education.
- Lack of effective monitoring and evaluation.
- Lack of provision of technical education in higher education.
- Due to geographical difficulty.
- Lack of skilled and experienced trainers
- Lack of necessary equipment for technical education.
- Lack of coordination between Demand and Supply.
- The curriculum of technical and vocational education is not of international standard.
- Non-cooperation with the private sector.

Quality

Curriculum

- CEHRD and CTEVT should be similar
- Credit Transfer System should be based
- Module based (specific) demand
- Technical Taskforce should be made Globally Competitive
- Applied Subject Module should be separate
- Study done in pre-diploma courses should be recognized in the first year of diploma

Infrastructure

- Government support
    - Class room
    - Lab, hostel
- Under one standard across the country

Tools Equipment

- Government support
- Under defined standards

Training

- OSU, Instructional Skills Module, Management

- Job induction training

Accreditation

- Giving association only after mapping
- Set standards for grading
- Schools with less than 50% students should be merged
- Poly technical school with different program would be better

Efficiency

- Providing quality education
  - Instructor Stability
  - Extra Class Management
- Carrier Counseling
- Job placement
- Agreement of local level job guarantee
- Scholarship number should be increased
- Teachers Performance Test / 5 years

Assessment

- Practical knowledge should be increased and should be approached systematically
- Internal / External

Certification

- Module based (According to how many modules are passed according to how many modules are required to read occupational curriculum)
- International and National Valid.

Other

- One day system (In training)
- For knowledge update, occupational development package should be developed and implemented

Management

Will the program be unified or diverse?

- As the current program is being operated through CTEVT and CEHRD, it should be integrated through Technical Education Management Umbrella Act.
- Subject areas to be integrated: curriculum, management, credit hours, evaluation system, verification system, human resource management, financial management etc.
- The implementation of the constitutional provision of free education up to class 12 should be ensured.
- How to manage technical education in federal, provincial and and local?

Scope of the Federal:

- Law and policy making, development of integrated certification system, curriculum creation and sharing in extension and resource management etc.
- State level:
- Permit and establishment of technical schools based on need and physical aspect management, conducting and managing standardized exams, monitoring and sharing financial resources.
- Local level:
- Partnership and monitoring in needs identification and operation.

How to include the private sector in the decision-making process?

- Federal: Policy formulation regarding private sector participation and policy making on private sector participation as per requirement
- Province: projecting and developing workforce according to the needs of the private sector, ensuring the use of developed workforce, providing an environment for on-site practice in business
- Local level:
- Participation in private sector participation in identifying areas of employment and areas of need

How to improve school management capacity?

- Separate management of technical and mainstream schools (not in the same school but in separate schools)
- By managing educational institutions with residential facilities in a highly technical mode
- By managing manpower according to standards
- Management of technical knowledge and business orientation in the management committee
- By managing the training of teachers and trainers
- By managing the laboratory according to the laboratory standards

How to develop the capacity of related stakeholders to understand technical education based on the principles of technical education?

- Stakeholders (parents/students) need counseling regarding technical education.
- By reforming the curriculum and evaluation system to emphasize practical rather than theoretical aspects of technical education
- By developing demand-based manpower development and supply system based on rationality

Other matters to be improved

- How to increase investment?
    - Through free management with the participation and partnership of three tiers of government up to the secondary level
    - By managing higher education costs on a participatory basis
- By ensuring pro-poor targeted scholarship for participation of all parties
- Utilizing foreign grants by implementing technical assistance and grants with priority

Integration

Problems:

1. The government should harmonize the curriculum of classes 9-12 under the education and human resource development center and the curriculum of the diploma level program under the CTEVT.
2. One authority to govern curriculum development
3. Considering the existing practices of other countries when preparing the curriculum under the technical edge
4. A provision should be made that the trainees who have received short-term training should not re-study the content they have studied before to receive higher level training/education.
5. The National Curriculum of Technical Education will be prepared and implemented.
6. Emphasis on practical, experimental curriculum rather than theoretical curriculum to develop 'Garikhane Sikchya'
7. To prepare a competency-based curriculum, market study of the related subject area and estimate the required manpower to create market needs and modify them in a timely manner.
8. There should be an expansion of institutions providing technical subjects in higher education, teaching
9. Revising its definition to change the current understanding of TVET.

Monitoring and Evaluation

Monitoring

Monitoring is the action of monitoring the state of implementation of the national objectives of education, whether the educational program is in line with the target, the problems of the program and finding solutions, giving advice, suggestions and guidance.

Problems seen in monitoring: -

1. After the implementation of federalism, the role of monitoring is reduced
2. The role of monitoring at the union, state and local levels is minimal)
3. Non-compliance with monitoring,
4. Non-development of integrated monitoring system
5. Lack of monitoring with plans

Federal:

Prepare a joint monitoring mechanism of the Ministry of Education, Department and CTEVT and the said body will create and implement an educational strategy including the educational problems and solutions found in the subordinate bodies

Province:

Build and implement supervision tools with coordination from district, local level and central

District and local level

Along with local level, district branches of EDCU and CTEVT coordination by preparing the monitoring mechanism and preparing the school and monitoring the school. Building a plan for the proper deployment and utilization of the school's educational resources, physical aspects, community participation.

- Class observation and study the external and internal environment of the school and emphasize on some educational improvement aspects.
- Building monitoring tools that meet national and international standards.
- Arranging monitoring including providing support,
- Implementing integrated monitoring system, and developing monitoring system including planning

Evaluation

It is what has been achieved is an accounting of whether objectives are being met or not. Evaluation of the first entrance test, after admission, before any educational activity is carried out in all activities from the beginning to the end. Under this, the student admission assessment is based on the internal examination of what the students have understood during the course, the practical test and the final or annual examination system at the end of the academic term.

Problems observed in evaluation:

1. The party itself has been long and complicated in constructing, testing and publishing the results of thematic questions.
2. Non-adherence to proper standards of practical examination
3. Non-integration of Pre-Diploma, Diploma and 9-12 level courses.
4. Absence or scarcity of materials for practical exercises
5. Lack of practical subject trainers or lack of trained trainers
6. Diversity in Verification

Suggestions and viable solutions:

1. Creating more multiple-choice questions and keeping less thematic questions when taking the exam
2. To organize a theoretical and practical examination system throughout the country by making national and international standards without giving experimental marks.
3. As there are many subjects to be studied, new expertise in the subjects is in accordance with the market for material practice
4. Financial management and training management to provide practical availability.
5. According to the program, the availability and durability of the subject trainers will be maintained, providing training opportunities and starting new programs or subjects only to the working trainers.
6. To distribute certificates only in order to be recognized in the international market for all technical subjects.

Students

Some of the problems of students

१। Late arrival of results
२। Lack of material for practical
३। Problem of books in library
४। Syllabus is very difficult
५। Lack of skilled teachers in related subjects
६। Problem of hostel
७। Drinking water and toilet problem
८। Problem regarding first aid for students
९। Problem regarding science lab, if exists it's of no use
१०। Practical field problem
११। Lab for practical subjects should be provided
१२। Weakness of school administration

A. Annex: Bagmati Province (29 30 July, 2022)

Access, Equity and Expansion	
SN	Present Situation
1	Only 54871 (51%) admissions in 107411 quotas
2	In class 10, 'C' in science and mathematics and 'D+' in English should be achieved to enter the entrance exam.
3	Tendency to drop out in class 11
4	Limited subjects
5	Provision of free education. (4 people out of 45/40)
6	In case of non-operation of programs in some educational institutions,
SN	Suggestions
1	Adjust and relocate technical educational institutions on the basis of need.
2	Streamline the student admission process.
3	Admission of Pre-Diploma in class 11.
4	Diversify the subject.
5	Selection of students for classified scholarships by school/ local level / district level.
6	Wide publicity to increase the attraction towards technical education.

Quality and relevance	
Questions	• How Align CEHRD and CTEVT Curricula? • How to ensure development/ Revision of Standard/ Curricula? • How to ensure standards and curriculum development under the ownership of BIAs? • How to improve formative assessment at class level? • How to operationalize Accreditation System? • How to ensure availability of machine and equipment • Instructors Training • On the Job Training
Standard and Curriculum	• Occupational Standards (KSA) and Curriculum should be developed and revised within NVQF • This should be same for all (CEHRD and CTEVT) • Standards for any occupation should be developed or revised in leadership of BIAs • Based on OS developed, Curricula needs to be developed and revised in close participation of BIAs • Curricula should be implemented based on credit hours (credit hours of pre-diploma and diploma should be aligned) • This should be revised within an appropriate time of interval, normally, 3 to 5 years based on industry need and change context (IT, global trend). • Curricula should include certain orientation on entrepreneurship dev.
Accreditation	• A separate authority of Accreditation • Standardization Criteria of Training Schools, Instructors (TVET teachers' qualification framework), Processes, Skill testing, Industrial Workplace etc. • Mapping of existing technical schools • Examine quality of the schools based on standard criteria • Decide and recommend further course of action • Ensure compliance of Standard Criteria for operationalization of the schools/Centers • Ensure effective monitoring and evaluation
Machine and Equipment	• Ensure minimum requirement of machine and equipment based on training standard developed by accreditation authority; • In addition, close partnership with BIAs for latest machine and equipment; • Provision of certain incentives need to create for BIAs
Instructors	• Ensure Minimum number of qualified (skills and industry experienced) instructors • Ensure career path; • Training and exposure (industry and global practices);
Workplace based Learning (WBL)	• WBL should be based on Standard developed by BIAs; • • Mandatory provision of OJT/technical • Internship/Apprenticeship Training)-duration could differ based occupation and industry requirement;
Employment	• Post training job placement facilitation for wage employment; • Job Fairs; • Render required supports (financing, business plan development and others) for entrepreneurship development (self-employment)
Labor market: major problems	Skill Gap & Mismatch: Skills needed by industrial establishments ▪ The skills, knowledge and behavior required in human resources, ▪ Generated from existing training programs ▪ It is found that there is no or different in the human resources

and challenges	Availability of LMI ▪ # Labor market data and information ▪ # (LMI-Labor Market Information)

Management		
SN	**Problems**	**Solution**
1		Infrastructure Development
2		Management of qualified and skilled manpower (job permanency)
3		Quality assurance: a) Syllabus b) Training c) Examination
4		Institutional Capacity Development; Equivalency Arrangement
5		LMIS (Labor Market Information System)
6		Coordination with Industrialists and Businessmen and Cooperation
7		Partnership (Federal, Provincial and Local) (PPP)
8		Management of Sufficient Investment
9		Fiscal Sustainability

Integration, Governance and Monitoring		
SN	**Problems**	**Solution**
1		Governing policy and planning should be arranged and be implemented both for TEVT and CTEVT
2		Under the title of the program, it should be planned with relative funds and also for the quality.
3		Union, state and local governments should coordinate and monitor according to their respective responsibilities. Understanding each other's responsibility and cooperating with each other.
4		Participating the private sector in policy making at the center, state, and local level.
5		Based on the needs of the market, the vital need of participation of the private sector in curriculum, training and certification development is seen.
6		Workplace based training program according to the demand of the market to conduct training on the basis of operating from the private sector
7		Managerial committee of schools operated by TEVT, CTVET should be provided with practical based training. Where, # Physical facility (building, lab and lab materials) # Teacher participation in policy formulation and implementation # Awareness to stakeholders at the local level about student enrollment and the future of the program.
8		Program permission of CTEVT. The responsibility of operation and management should be given to local government officials.
Students		
SN	**Problems**	**Solution**
1	Full information should be given about the admission to this stream,	
2	It seems that this stream is thought of only up to class 12. If the parents have to pay the expenses after 12th grade, how much it will cost should be informed in advance	After class 12, it would be better if there is a system to continue in this subject till Master
3	Lack of subject knowledge is a problem related to students	
4	Lack of teachers/instructors Lack of laboratories/labs	
5	No hostel	
6	Library not organized	
7	Lack of extracurricular activities	
8	Course not completed on time Result not published on time	

9	Basic (Physics/Chemistry/Math) course is complicated	
10	Not focused on skills.	

B. Annex: Province 1

Access, Equity and Expansion

Access:

- Access to English Medium, Bridge Course
- Provision of scholarships
- Assurance of self-employment
- Provision of necessary facilities
- Physics, Chemistry and Mathematics should be narrowed.
- Should be related to higher education.
- Based on local needs
- Not having many options in choosing subjects at the upper level.
- Increase in fees and decrease in the number of colleges.
- Lack of job security.
- Lack of clear policy.

Equality

- Provision of technical preparation work
- Provision of a gender friendly school environment
- Provision of disabled friendly and women friendly structures
- Lack of awareness of diversity
- Employability and educational qualifications, but employability first priority

Expansion

- Merging the subject organizations
- Geography In expanding technical education based on local needs and employment potential should be emphasized.
- Technical education should be linked with lifelong learning.
- Development and delivery of on-demand curriculum up to Bachelor's and Master's degrees
- On the basis of skills test, the opportunity to study at higher level should be provided.
- Vertical Expansion
- Life skills should be given importance from the lower level and extended to the upper level
- Restructuring of the higher education level should open the way for pre-diploma
- Provision should be made for credit transfer training as well
- There should be uniformity in the curriculum between technical stream and CTEVT
- Horizontal Expansion
- To be able to enter into each other by coordinating the common stream and the technical stream
- Local needs Market demand Geographical conditions and employment potential
- The basis should be expanded

Quality

Accreditation

Why	How
To regulate, manage and facilitate compliance with standards and to ensure quality and equivalence	From central level councils or state level structures

TVET Reasons for low pass rate and measures to improve

Reason	Ways to improve
Lack of overall schooling and basic knowledge skills To be similar to mainstream education in terms of classroom and school infrastructure and facilitation of learning	Improving the quality of school education, Improving the infrastructure of schools Improve the training process, Reduce theoretical to workable basis of assessment

Selection of trainees cannot be based on merit and interest	
Whether or not it is proper to differentiate the syllabus of Technical Stream and CTEVT	Develop curriculum based on the NQF curriculum A working group including the private sector should prepare and implement the same curriculum for both Technical Stream 11th and 12th which need to be increased can be include OJT Semester System
At the executive level, the arrangement of OJT will be useful or not	Learn by doing technical education and not by reading If OJT done in the workplace or industry, it helps to gain familiarity with the work and gain competence It's easy to get work done and get it done efficiently To make it possible
TLM and curriculum related issues	
TLM available accessible bath being expensive Instructors not being tech-friendly Difficulty in use due to lack of access to technology everywhere Lack of provision and proper management of library in schools Inappropriate use of materials Language difficulty in content	To develop curriculum based on NQF To prepare text book Subsidizing textbooks and making them available free of charge Developing a library with adequate materials in all schools by preparing standard standards Instructor training in selection and use of reference materials
Availability of teachers	

Problems	**Solutions**
• Not getting a qualified instructor in all subjects (Master's degree holder unavailable) • Not getting the training done • Ensuring the instructor's job • Lack of training • Instructors not being tech-friendly • No exposure	• Projecting the future and creating permanent posts according to the number of students • To perpetuate the service of the coach • Uniformity in sole facilities • Teaching training • Exposure; Visiting and training • Defining the meaning of Career path clear (career counseling)
Instructors situation and trends	
Situation	**Solution**
• Technical stream Permanent instructor • There is a permanent post in CTEVT • In most of the subjects in Technical stream, minimum experience of one year is considered • There is a problem of sustainability in all places	• Create rank based on number of students and subject • To be given only based on operational needs of the school • To provide subsidy including all infrastructure while running the school • Permanent through Service Commission
• An effective mechanism for recruiting trainers • Provision of service commission • Develop mechanisms and processes as per the syllabus approved by the Service Commission • Operate from central or state level	

What to do to improve the competence of trainers	
Situation	**Solution**
• Given for CTEVT is not enough • Technical Stream is not given	• Conducting training in all provinces with the technical support of TITI • Facilitating higher qualification • Conduct workplace or industry based training for practical exercises
Need of license	• Teaching art is also a profession • It can develop the most qualified and competent trainers
Physical infrastructure	• A different classroom arrangement • The laboratory is accessible to all students • There should be no technical difficulty in running the laboratory • To keep information about the newly invented technologies, all educational institutions and schools should build IT labs • Adequate consumables • Arrangements including capacity building of staff working in the laboratory
What improvements should be made in practical training?	• In a learning environment by converting knowledge into skills • Facilitation by instructor • Group work and presentation • Personal report • Field studies and reports
What would be the workplace-based training model?	• Cost sharing • Full government investment
How to manage OJT opportunities	• OJT locations or institutions to be updated annually by the school or school • Arrange for evaluation by internal and external supervisors • Schools should provide adequate minimum preparation and orientation • Providing minimum lunch/meal expenses to trainees
Evaluation and Certification	
Need to improve • Formative evaluation • Evaluation of the instructor by the student is essential • Skill test • In the exam system and question • Internal evaluation	Manner of solving • Evaluating by solving problems • Developing Tools • Practical and on-the-job training • Grading based on performance • Improving the examination environment by external monitoring
For quality improvement	
The problem • Lack of infrastructure Lack of qualified trainers teaching or training • Examination system Pre-qualification of trainees	Solution • Develop physical infrastructure that can be learned through sufficient practice • Qualified trainers to increase and improve product and service facilities • Focus on technical knowledge skills and conduct training of trainers for the same

	• Prepare test criteria by practice work, increase % of practical test • Reduction in % of theory test • Improving the overall quality of education
Outputs	• Wide publicity and facilitation in selection to give short term training only to those who need it • Couple income growth with the job market • Increase the number of scholarships for long-term programs • Timely improvement in learning and assessment process • Implementation of Advance diploma course
Improve efficiency	• Determination of enrollment quota according to the capacity of the institution conducting the program • Improve the training process • Providing reference materials and textbooks free of cost • Continuously evaluate and document • Establishing an environment for continuous use of skills institutionally (school, industry, office) • Conducting chance exams during • Prioritize and monitor TVET certificate holders for employment • Managing seed capital to create entrepreneurs
Relevance	• It is difficult to keep industrial trainees as they have to go elsewhere for training and work • Identifying and prioritizing potential industries at national and state level • Develop curriculum according to industry needs • Conduct refresher training of trainers on the job or in industry • Conducting specific types of TVET programs for employment (long term and short term) according to the potential and needs of the industry. • To represent organizations like CNI, FNCCI of industrialists in OJT coordination committee • Coordinating with business people
Apprentice's skills match the industry market but lack of efficiency due to work specialization	
The problem It takes 10 years to change the curriculum, technology changes day by day, skilled people migrate abroad	Solution • Because of changing the curriculum of TVET, coordinating with industry to ensure employment for skilled manpower
Increase income	• Coordinating to develop industry wise curriculum • Develop industry-friendly policies to expand employment by developing the industry's capabilities • Investment in the industry should be of a sustainable type • To increase the output and productivity of the industry by producing quality trainees
To increase income	• Work related skills development • Development of quality technical knowledge to create self-employment • Market and investment assurance

	• To improve skills and efficiency as per the invention of tools and equipment used in industrial business. • Combine study and earn program with practical exercises
Reasons for low employment rate	• Less expansion of industry business • Experienced manpower is more efficient than trained • Lack of coordination between supply and demand (not producing quality manpower according to market demand and conditions) • Lack of income of trained persons • Pursuing higher education studies • Relatively low soles • Fewer employment opportunities • Growing interest in higher education
To increase the employment rate	• Expansion of industry business • Arranging experienced training manpower • Arranging courses and training to produce quality manpower according to market demand and conditions • Arranging minimum wages according to merit • Organizing job fairs • To develop competencies as per NQF

Governance

Organization: - The present rules are governed by the provisions of the State Council as the Executive Head, ex-officio members, and the arrangements have been made by the Union

State: - TVET State Council as per following

President – Education governing Minister (Ministry of Education)

Under Secretary - TVET State Office Head

Other areas to be represented:

Secretary / General Branch Head	Ministry of Social Development, Education Branch Chief	
	Related thematic Ministry	# Industry
	Ministry of Industry and Commerce	# Employment
	Regional Subject Expert	# Labor
	Technical Education School	# Tourism
	Any two heads of Local Level	# Health
	Social Development Committee Organizer	

Local: - TVET Coordination Committee

Chief: Palika Chief

Under Secretary: Education Chief

Member: Deputy Head

Member: Social Development Committee Coordinator

Engagement: Technical Education Chief

Industry Commerce Association Representative

Training Provider Organization Representative

Chief Administrative Authorized

Subject Expert

Federal Council: - Determination of standards of schools

Prepare national curriculum format and curriculum framework

Prepare quality check report and determine future strategy

Examination and distribution of certificates/verification

State Council: - Technical schools permit, operation and management

Coordination of all types of schools

Budget Management

Monitoring, Inspection

Capacity Development
Local Unit: Grant Management
Monitoring, Inspection, Supervision
Conducting Short Term Training
Coordination and Support in Skill Testing
Recommendation for Technical Education Permit
Presentation
Federal Council
To make an additional provision that the executive head of the provincial council will be an ex-officio member in the current law and regulations
State Council
Chairman: Minister of Social Development
Secretary: Head of the Provincial Office
Other representations:
Secretary and Head of Division of the concerned Ministry
Social Development Committee Chairman
Ministry of Social Development Secretary or Head of Education Division
Federation of Commerce and Industry
Area subject matter experts
Technical schools
Among the local level heads, 2 people including 1 woman
Local TVET Coordinating Committee
Chairman: Head of local municipality
Secretary: Head of Education Branch
Member: Deputy Head of Municipality
Member: Social Development Committee Coordinator
Member: 1 person from technical schools
Member: Representative of Industry and Commerce Association
Member: Training provider organization
Member: Chief Administrative Officer
Members: Subject matter experts
Jurisdiction of the Federal Council
Setting standards for schools
National Curriculum Format and Curriculum Framework preparation
Quality test report prepared and future
Determine strategy
Examination Conduct and Certification
Budget management
Skill test
Provisions regarding appointment of teachers
Scope of the Provincial Council
Licensing, operation and management of technical schools
Coordination of all types of schools
Budget and program management monitoring, monitoring Capacity development
Coordination and Management of Examinations
Scope of Local Coordinating Committees
Budget management and disbursement of schools and trainers
Monitoring, Inspection and Supervision
Conducting short term training
Coordination and assistance in skill testing
Recommendation for technical school permit
Teacher management on immediate contract for vacant teacher posts

Integration

- How can the development and revision of standards and curriculum based on National Qualifications Framework be ensured?

- National Qualification System Standards and TVET Curriculum Development should be done in an integrated manner, so that products are produced according to the standards.
- In order to make the curriculum timely and practical, there should be an assurance of construction and modification in accordance with market demands and needs.
- Integrating Technical Stream (CEHRD) and CTEVT Syllabus,
- Consolidating the syllabus of both education (CEHRD and CTEVT) into one semester system.
- How can short courses be integrated into the long-term program curriculum?
- Accreditation of short-term training and incorporating it into the system on the basis of modular batches or lessons.
- How can multiple provisions for the same qualification be facilitated?
- The semester system should ensure exit and entry on the basis of standard assessment based on modular way and such provisions should be applicable in the market system and industry but should have verifiable qualification for standard qualification, in this way the trainees who have left the training and gone to work will be counted in OJT based on the work done in the respective field. What can be done?
- How can the recognition of TVET qualifications be ensured?
- Applying the recognition of TVET qualifications to the criteria based on the national qualification system
- How can the problem of identification of TVET passed trainees be addressed?
- Removing the pre-diploma program and incorporating it into a single system
- Ensuring the identity of the produced manpower according to the demand of the national and international market.

Management

Capacity development of school management

- Orientation of the existing education related laws to the business
- To make employees aware of their duties and rights
- Providing parenting education to parents
- Making Teacher Parents Association functional
- Making Q A responsible

What kind of training should be provided to improve management?

- Short term capacity development training for students, teachers and parents
- 1 month PR management training
- Refresher trainings from time to time

Instructor quality

- Selection of qualified trainers
- Clear terms of service and convenience and stability
- Provision of additional facilities in remote areas
- To conduct programs related to training and capacity development

OJT

- Arrangement of financial facilities including lunch for the participants in OJT
- Linking OJT to productive work
- Effective inspection and monitoring by relevant agencies
- Orientation arrangements and effective coordination for organizations, industries, firms doing OJT
- There should be international standards for evaluation

Employment

- Allowing/sanctioning technical education only on the basis of market or need
- Ensuring employment of technical manpower
- Create an environment where work is respected

Budget assurance to schools

- Since it is the state policy that education up to secondary level is free, the union, state and local levels should manage the necessary budget for technical education up to class 12.
- To manage the budget so that the association has 50%, the state 20% and the local level 30%

• To manage technical education operations through a one-door system from one of the Education and Human Resource Development Centers or CTEVT.
MP Presentation
• TVET act need to be prepared in the spirit of the constitution • Based on TVET, prepare provincial TVET act and policies • Prepare Nepal's standards based on international TVET standards / NVQF practices • Open educational path in TVET up to master and doctoral • Prepare workforce based on market needs • Implement short term training by authorized agency • Link informal/ traditional skills with formal education • Establish autonomous TVET authority in the province and units at local level under provincial TVET authority • Financing, 10% by local levels, 20% by province level and rest federal level • At least on technical schools in each local level to prepare local level workforce • Coordination mechanism in TVET Act to coordinate all the three levels.

C. Annex: Gandaki Province (21-22 August, 2022)

Access, Equity and Expansion		
SN	Problems	Solutions
1	Student Enrollment Issues • Course complexity, • lack of mapping of institutions, • expensive fees, The admission system is impractical.	• Keeping in mind the complexity of the curriculum, non-essential subjects including science should be simplified without making them mandatory. • should be mapped on the basis of employment opportunities and not competitively; • Fees should be made affordable. • Student admission procedure should be simplified.
2	Technical school / institutes • Non-implementation of merit system, • lack of easy access, Non-uniformity in time period.	• Compulsory implementation of merit system, • Ease of access should be provided, • There should be consistency over time.
3	Gender Equality and Social Inclusion (GESI) • Classified quotas may not always be met, • Not receiving the recommendation for the scholarship.	• Under the classified quota, there should be a provision to fill the unfilled quotas through general admission. • Organized scholarships at the regional and local levels.
4	Objectives of TEVT: • To produce middle level technical manpower, • To provide opportunities for higher studies after completing certain qualifications, • Therefore, both employment and educational qualification are the objectives of TEVT.	• Establishment of institutions only by ensuring employment, • Establishment and capacity development of institutions as per need, • Provision of qualified trainers, • Stability of coaches/assistant coaches, • Course (Horizontally, Diagonally, Vertically), • hostel arrangement, • Arrangement of Workshop/Lab.
5	Relevance: • Placement Unit and Counselling, • Enterprise, Advising and Partnership Committee, • Arrangement of Internship, • The relationship between academia and industry professionals.	

Quality		
SN	Problems	Solutions
	Institutions and programs need to be accredited. This creates trust in institutions and programs conducted by institutions. • A clear standard has not yet been made. • Making legal arrangements	• Prepare a directory with Criteria, Indicators, discuss with the stakeholders and encourage the programs conducted by the organization or organization to be accredited, • Criteria should include the physical infrastructure available in educational institutions, availability of trainers, trainee support programs, agreements between educational institutions and industry, collaboration, regular study research, quality improvement plan management, etc.
	The passing rate of trainees is low. • Admission standards are weak • Lack of complexity and uniformity in curriculum • Lack of skilled trainers with high turnover • Annual Evaluation System • Linguistic problems	• Encouraging higher grade students to enroll, • Arranging special classes for low grade students, • simplifying the curriculum, • Developing and revising the curriculum so that it is not mandatory for those who want to enter the world of work to study the subjects of chemistry and physics only for the trainees who want to develop their academic skills, • There should be a provision for refresher training incentive allowance for trainers and a permanent provision. • There should be a formative assessment semester examination system • The content of technical subjects should be developed in Nepali subjects
	Instructor's management	• The number of instructors is low, the number of temporary, contract available is high • Psychological impact of permanent and temporary • The number of instructors is less in proportion to the number of students • Entry into service without training and license • Less competition in the selection of coaches
	Curriculum Quality of Teaching Learning Materials (TLM). • To determine equivalence and maintain quality as the syllabus varies • Confusion in the understanding of common people due to diversity in the organization • OJT is not in all programs Teaching learning materials and textbooks are not relevant and available.	• Creation and implementation of integrated curriculum. • Maintain consistency • OJT should be arranged in all kinds of programs. • Textbooks and teaching materials should be developed.
	• Physical infrastructure • The program will be run without the provision of minimum infrastructure.	• Classrooms, laboratories and educational equipment should be arranged • Availability of coaching staff • Provision of educational learning materials • Provision of essential infrastructures including drinking water and toilets • Arrangement of land playground for practical exercises,

		• Residential facility should be provided • The training class should have technology-friendly experimental materials and the laboratory management should be state-of-the-art.
	A workplace-based training model • The training system could not be connected with the workplace, the work of teaching and learning in educational institutions was more like general education • Failure to adopt student-centered teaching methods	• Student-centered teaching methods should be used. • Institutional agreements should be made with the industry and business according to the program of the educational institution, • Provision of OJT in all program, • Conducting Industrial Apprentice Training, • Easy access to industry for hands-on practice • Using industrial workers as resource persons • Conduct job fair, career fair program from time to time • Arrangement of Exposure Visit for Trainer Trainees.
	Evaluation and Certification • Training methods tend to be more traditional • Failure to adopt student-centered teaching methods • Theoretical and practical assessment is not objective • Lack of trainer evaluation system by trainees • Internal assessment of class 11	• Competency based evaluation system should be implemented. • Since it is a technical subject, student-centered teaching methods should be used. • Arrangements should be made to show the trainees by doing Hands on Practices in the evaluation of practical exercises. • Using advanced methods of participant evaluation. • There should be a board exam arrangement in class 11 as well.
	Governance • The budget of the related title has been spent elsewhere • Publication of results	• Monitoring should be done to see if it is spent on the specified topic. • The result should be published within 3 months of the examination • The role of external examiner should be improved.
Management		
SN	Problems	Solution
1	Physical 1. Lack of suitable classrooms and buildings 2. Lack of suitable furniture 3. Labs, devices, equipment and other necessary materials, 4. Fields and other facilities Hostels, drinking water, toilets	• Managing the necessary resources in partnership with the Union, State, local level and related organizations. • Proper management of schools/educational institutions that do not have the necessary infrastructure • Proper management of schools/educational institutions that do not have the necessary infrastructure.
2	Human Resources • Students • Trainers • Non-Teaching Staff SMC	• To promote technical education. • There should be more service facilities to increase the attractiveness of the profession. • Managing the necessary manpower by creating an organizational structure • The recruitment process should be simple and transparent.

		• To represent persons related to technical matters in SMC.
3	Economic	According to the organizational structure, the amount required to make the union, state, local level and related organizations responsible will be 40%, 30%, 20% and 10% to arrange the expenditure burden.
4	The responsibility and accountability	• To arrange a separate education administrator to look over technical • Making legal arrangements to make the local level more responsible for monitoring and supervision • In relation to admission, the local level will facilitate the process by providing scholarships on the basis of standards education acts.
5	Establishment of school without research/mapping	• Having adequate infrastructure, education system. Schools should be established only on the basis of maps and in-depth study. • Make adjustments based on the number of students, subjects, new students and needs.
Integration		
SN	Problems (Technical Stream and CTEVT Course)	Solution
	Standards and Curriculum Development and Revision	
1	9-12, Pre-Diploma and Diploma levels have different curriculum development institutions	• Integration of curriculum development organizations
2	Variety of courses, variety of recognition, variety of course duration	• Integrated/same curriculum creation, self-implementation, same time period
3	Higher participation of academic and technical manpower in curriculum development	• There should be participation of primary technical manpower as well as field technicians and employers in curriculum creation
4	More priority given to academic courses	• Different curriculum and evaluation system should be developed for students who are interested in research in technical subjects and students who are interested in skilled professions
5	Non-uniformity in regulation	• Should be regulated by a one-door system
6	Not giving certificate without completing academic course (Mutti entry/Exit)	• After learning certain skills, they should be allowed to go to work for a certain period of time as needed, and if they want to continue again, further studies in previous qualifications to be given an opportunity. (Farm MGT, Livestock)
7	Non-inclusion of short-term courses in the academic fund (eg: Plumbing)	• Making certain subject of diploma course and short-term course of the same subject practical
Governance		
SN	Problems	Solution
1	The lack of mutual coordination between the three levels of government	• The legal system of clear division of labor (including duties, rights and responsibilities) between the three governments.

2	Lack of assurance of minimum criteria for school running technical stream education	
3	Lack of proper supervision and support	
4	Centralized monitoring of administrative mechanisms	• Monitoring bodies should be established at the provincial level to maintain the quality of the federal government provided by the local level legislation
5	Lack of equipment for transfer of <<>> local level act	To transfer the authority of the local level. • For this, the government of the three lower governments should give 50% of the money of the provincial government, 35-40% of the provincial government, and 10-15% of the local government.
Students		
SN	Problems	Solutions
1	Expectation is not anticipated (false marketing)	1. Consultant 2. Effective human resources. 3. Strict monitoring and implementation of policies from concerned authority. 4. Assurance of job placement for effective manpower.
2	Delay in result publication/improper Recognition of certificate.	
3	Framework of education.	
4	Aligning of different curriculum.	
5	Scarce in experienced teacher's persistency	
	Disable friendly environment. Accessibility	
6	Nepotism/ favourism	
7	Lack of *Replacement of technical equipment.	
8	Job satisfaction/Job issue, exposure	

D. Annex: Karnali Province (25 26 August, 2022)

Access, Equity and Expansion		
SN	Problems	Solution
1	Admission not readily available	• Management of at least one technical school in each municipality • Provision of equitable scholarships • Role of local level
2	Qualification	• Correspondence between employment and educational qualification
3	Access to higher education	• Policy arrangement for higher education studies in the same subject after three years diploma study
4	Schools are not operating according to geography and population	• Schools should be allowed to operate based on geography and population • Local level adoption
5	Permission based on access	• Permit to operate based on need
6	Subjects according to the needs of the labor market are not conducted	• The teaching of subjects according to the needs of the labor market should be brought into operation
7	Employment problem	• Employment should be guaranteed • There should be a coordinating role between educational institutions and industrialists and manpower supply should be managed according to the needs of the labor market
8	Lack of coordination between labor market needs and produced manpower	• Manpower should be produced according to the needs of the market

9	Access to higher education	• There should be a policy arrangement for higher education studies in the same subject after three years of diploma studies
10	Increase in wage	• Coordination with industry professionals • Expansion and growth of business
11	Inability to change subjects for higher education studies	• Opening the way for higher education studies
Quality		
SN	**Problems**	**Solution**
1	Curriculum • There is no timely revision of the curriculum. • Not fully matching the curriculum of the subject market • There is a difference between CEHRD's Technical Stream and CTEVT's Diploma level. • Failure to have adequate arrangements for OJT in Diploma level courses. • Insufficient availability of TLM and textbooks.	• The curriculum should be revised over time. • The curriculum of technical education should be relevant to the demands and needs of the present market. • CEHRD's Technical Stream and CTEVT's Diploma level curriculum should be the same. • Adequate arrangements should be made for Diploma level course OJT. • TLM and textbooks should be made available by the institution on time.
2	Instructor's management • Lack of skilled and experienced trainers. • In the current situation, the process of selection of the permanent coach is not clear. • Not being able to get the trainers needed by the organization. • Lack of training and training of trainers. • Trainers can't last long. • Not having a Darvandi Kitan (position permanency) for trainers.	• For the provision of skilled and experienced trainers, the services, facilities, position, level of the trainer should be arranged in the laws and regulations and selected procedurally. • Trainee qualified, skilled and highly qualified experienced subject trainers should be determined and selected by the Public Service Commission. • Skilled trainers needed to increase production. • Training and coaching of trainers should be done from time to time. • The trainers should be provided with the necessary service facilities to sustain them for a long time. • According to the subject and class, the instructor should be made available.
3	Physical infrastructure • Lack of adequate and quality management of physical infrastructure and laboratories in technical schools. • Technical trainees have not been able to fully improve their quality practical skills in the practical training according to the curriculum	• There should be quality management based on physical infrastructure and laboratory requirements. • Technical trainees should manage the necessary materials to fully improve the quality of practical skills in the practical training according to the curriculum, develop the profession and business in the market and the trainees should have the opportunity to develop practical skills.
4	Workplace-based training models • Lack of development of workplace-based training models.	• Developing models and methods of workplace-based training models and preparing and implementing experimental and OJT guidelines, internal and external supervision should be in accordance with the rules. • The trainees should be evaluated based on their ability and regularity.

		• OJT should be assigned in coordination and agreement with government, non-government and privately run organizations in order to develop thematic skills.
5	Assessment and certification • Formative assessment in technical education should not be fully implemented. • Absence of instructor in regular lessons. • Failure to make necessary improvements in the skill test of students. • How to improve the final examination system of students? • What are other relevant issues for quality improvement?	• In order to improve the formative assessment (constructive assessment), the trainees must take class test, conduct project work to develop their skills and conduct field visit and give homework and provide feedback by accounting the student's achievement. • Using logbooks by students to make instructor's presence in regular lectures and review them monthly. • It seems necessary to use different methods of training to evaluate the trainer by the trainees. • To test the skills, take unit test, monthly test, and quarterly test and collect the results, apply the semester system in technical education. • In order to improve the final examination system, complete implementation of the curriculum, preparation of specification table and exam level question paper should be conducted and sub-examination should be conducted by skilled personnel and examination results and elimination of errors in the examination results. • In order to improve the quality of technical education, it is necessary to implement the complete and quality study and teaching work by the skilled instructors of the theoretical and practical aspects of the curriculum, efforts should be made to make technical education quality by connecting skill with labor, labor with industry, industry with production, and all three levels of government should support and cooperate in the development of technical education. And the investment should be continuously included in the plan and implemented.
	Questions: • Who is responsible for manufacturing TLM? • What are the problems in OJT? • How will the teachers receive training and what should be included?	Responses: • Teacher training based on training manuals. ToT should be held in provincial level and should be systematic. • Only one organization should be allowed to manufacture TLM and all school should take the TLM from them. • Duplication of program should be stopped.
Management		
SN	**Problems**	**Solution**
1	Increase the number of long-term and short-term programmes	A policy should be made to complete all levels by coordinating trainings at different levels. Training should be timely and employment oriented.

2	High tendency of students to drop out Reasons: The fees of the programs are expensive, employment is not guaranteed, there is no opportunity to get higher education, there is no housing arrangement	It should be made completely free, arrange for chance exams, inform about its importance from the basic level
3	Low employment rate, Reasons: Lack of job market, lack of coordination between market demand and manpower production.	• Conducting programs in partnership with the private sector and producing only necessary manpower. • Employing students in productive work while studying. • Giving information about its importance from the basic level.
4	School Management Capacity Building	• Conducting educational observation visits, training, seminars, conferences, • Arrange to have experts in related fields in the committee, • Collaboration with government and non-government organizations • Increased access to and availability of resources • To form a committee free from political interference • Social testing reviews public hearings
5	Training quality	• The government should manage permanent manpower. • That is, capacity building and periodical training should be managed, development of a training mechanism at the provincial level, • Arranging sightseeing tours, • Adequate availability of resources, • To organize various thematic workshops, discussions and seminars etc • Provide training with an emphasis on proactive learning
6	OJT	• Effective monitoring should be arranged, • Making agreements with private industries to ensure that they get job opportunities, • Making resources available
7	Employment	• Timely curriculum should be made, revised from time to time, • To conduct recruitment programs only according to the agreement with the employer and the demand of the market, • Emphasis should be placed on maintaining quality • Emphasis on the production of skilled manpower
8	Federal, state and local level coordination	The union will work to maintain quality by making policies and laws, the provinces will assist in program implementation, and the local level will implement the program and effectively monitor it, so that the government at that level will adopt the policy arrangement.

9	Monitoring is low and results-oriented	Management, training, resource availability and management, etc., capacity development, training, etc., should be developed and monitored at the federal, provincial and local levels.
10	Ensuring the necessary budget for the school	• Arrangement of grants at the union, state and local levels • Parents support, • Support from partner organizations, • Income of the school (including income from productive activities of the school)
11	Make it real free	• Federal, state and local levels take full ownership and manage the budget. • Arranging concessional installments (paying by students themselves) • To manage the "Seed Money" • To arrange technical education grants
12	Federal, state and local level budget percentage	Federal 50%, state 30% and local level 20% should arrange budget allocation and distribution through local level.
13	Promotion of programs under TECS	The government of Nepal should create and manage position permanency
14	Financial Management System	PPP model
15	There is no uniform system for TVET	The government of Nepal should make policies and laws and the related ministries should only work to maintain quality, or make technical education technical and make the current CTEVT independent and entrust quality maintenance or find an alternative, all levels of government should take responsibility and manage adequate budget, regulatory bodies and implementation. Organizations should be arranged separately
Integration and Governance		
SN	**Problems**	**Solution**
1	NVQS and curriculum development • Inconsistency in syllabus of 9-12 and CTEVT. • The course is not designed according to labor market analysis. • The course could not be modified according to regular and market demand. • Course Standard of Diploma level should be modified.	• A unified curriculum should be created based on a unified system. • Curriculum should be developed based on labor market analysis. • There should be periodic revisions in the curriculum • Diploma level course should be modified and advanced diploma course should be added.
2	Technical stream/ integration of curriculum of 9-12 and CTEVT • Policy ambiguity in technical education.	• Technical Education Authority should be formed to provide technical education through a single system.
3	Integrating short-term skill training and long-term programs into the curriculum. • Lack of combination of curriculum in short term training and long-term program.	• Curriculum combination, coordination and upgrading system should be implemented in short-term training and long-term programs.
4	How can multi-entry/exit procedures be facilitated for the same qualification?	• Although the duration of the course is long, a provision of disaggregated verification based on skills learned should be implemented.

	• Duration of entire course is long, no provision of separate verification based on skills learned	
5	How to ensure recognition of TVET qualifications? • Not getting full recognition of TVET qualifications.	• Forming a technical education authority and certifying all technical skills accordingly.
6	How can the problem of recognition of TVET pass trainees be addressed? • Non-recognition of TVET qualifications.	• Forming a technical education authority and certifying all technical skills accordingly.
7	What kind of organizational structure is needed for TVET at the federal, state and local levels? • Continued policy ambiguity on TVET.	• Establishing the Technical Education Authority and preparing the organizational framework accordingly. • A stratified policy should be made.
8	What could be the roles and responsibilities of TVET structures at all three levels? • Lack of clear division of responsibilities.	• The center will work in the areas of policy, planning, quality assurance, the province will do MoE and Quality assurance, and the local level will do planning and implementation.
9	In relation to monitoring and coordination • no specific responsibilities have been assigned in relation to monitoring and coordination between 3 levels (federal, state and local).	• Clearly, certain responsibilities should be assigned in relation to monitoring and coordination between the 3 levels (federal, state and local).
Students		
SN	**Problems**	**Solution**
1	Simultaneous study of practical as well as theoretical studies does not occur	Experimental work should be done as soon as possible subject material,
2	Study time exceeding the stipulated year, Example: It takes 4.5 for 3-year Diploma Civil Engineer	Education should be completed, the system should be implemented,
3	Lack of evaluation of curriculum and schools by the concerned authorities	• Sufficient monitoring should be done • Direct interaction program should be arranged with the students
4	Absence of subject teachers	The practice of teaching more than one subject by one teacher should be stopped
5	Lack of education system including planning,	• Production according to demand and sale according to production • After studying the number of students and the adequacy of teachers, the school should be given a teaching ratio.
6	Lack of necessary counseling for students,	Counselors should emphasize on direct meeting and advice
7	For the library Lack of physical structure and lack of related course study, books for teaching,	Sufficient knowledge books should be available in the relevant field,
8	Technical education is limited to the name of practical education. There is no arrangement for things like field visit and education tour.	Experiential work should be arranged for learning achievement based on the required syllabus
9	Shortage of experienced teachers, specialized teachers The condition of not being able to coordinate practical activities with studies, of teachers	Along with qualifications, experience should also be measured

10	Lack of required study inspection by the responsible body,	Inspection should not be treated as a mandatory subject
11	Needed skills during employment, nepotism more than efficiency, nepotism problem	During employment, performance and skills should also be tested Nepotism and nepotism should end
12	Lack of adequate transport facilities,	
13	Although technical education is expensive and promising, it cannot be of quality and effectiveness in actual practice.	Looking at the overall category Technical education It should be made as affordable as possible The education system based on daily life should be ended and education system should be adopted
14	Although interesting policies and action plans have been prepared, the lack of implementation is affecting the future of students and the large productive workforce of the country, especially the technical education sector, the backbone of the country's development.	Formulated policy action plan To be strictly enforced
15	Technical education is also limited to written examination rather than practical learning.	Technical education Practical learning should be arranged along with written
16	determined by the administrative body Not teaching according to credit hours	Subjectively exempted time It should be used only for academic purposes
17	Semester exam and annual exam results are not published on time.	No delay in publication of results,

Annex: 8 Sample Group Presentation at Biratnagar Workshop

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$ ljljwtfsf] ;+jf]wg gePsf]
% /f]huf/L / zl} lfs of]Uotf b'j} t/ /f]huf/LnfO{ klxnf] k|yldstf

lj:tf/

! ePsf ;fdfg ljifout ;+:yfnfO{ dh{ ug{]
@ e"uf]n :yflgo cfjZostf / /f]huf/sf] ;DefJotfsf cfwf/df k|fljlws lzIffsf] lj:tf/df hf]8 lbg'kg]{ .
# k|fljlws lzIffnfO{ hLjg kof{Gt l;sfO ;+u hf]8g' kg{] .
$ Aofrn/ / df:6/ l8u|L ;Ddsf] dfudf cfwfl/t kf7\oqmdsf] lgdf{0f tyf k7g kf7g % l;k k/LIf0fsf cfwf/df dflyNnf] txdf k9g kfpg] cj;/ k|bfg ug'{ kg]{ .

Vertical expansion

- tNnf] txb]lv g} hLjgf]kof]uL l;knfO{ dxTj lbb} dflyNnf] tx ;Dd lj:tf/ ub{} nfg' kg{]
- Pre diploma txnfO{ k'g{;+/rgf u/L dflyNnf] tx ;Ddsf] cWoog ug{ jf6f] vf]Ng'kg{]

- 5f]6f] cjlwsf] tflndnfO{ klg Credit transfer sf] Joj:yf ug{' kg{]
- k|fljlws wf/ tyf CTEVT ljrsf] kf7\oqmddf Ps?ktf x'g' kg{} .

Horizantal expansion

- ;fwf/0f wf/ / k|fljlws wf/sf] tfnd]n u/L Ps csf{df k|j]z ug{ kfpg]
- :yflgo cfjZostf jhf/sf] dfu ef}uf]lns cj:yf tyf /f]huf/Lsf] ;DefJotfsf
- cfwf/df lj:tf/ x'g'kg]{
- k|ffljlws lzIffsf ljifoj:t'nfO{ cGo ljifodf Plss[t u/L k7g kf7g ug'{ kg]{ .

समूह २
गुणस्तर तथा सान्दर्भिकता

मञ्जु घिमिरे (प्रिन्सिपल) ओखलढुङ्गा स्कुल अफ हेल्थ साइन्स
कृष्णराज राई (उपसचिव) लेटाङ नगरपालिका मोरङ
गणेश दाहाल (इन्जिनियर) शैलेजा आचार्य स्मृती पोलिटेक्निक मोरङ
धनकुमार चोङवाङ (प्रअ) श्री नारायणी नमूना मा वि मैवाखोला ३ ताप्लेजुङ
बिजयहरी शर्मा (DG) नेपाल उद्योग परिसँघ प्रदेस १ मोरङ
बाबुराम ढकाल (अभिभावक)/ विराट एग्रोटेक विराटनगर

Accreditation

आवश्यक छ/ छैन	कारण	कसरी गर्ने
छ	मापदण्डहरू अनुसारको नियमन, व्यवस्थापन र सहजीकरणका र गुणस्तर सुनिश्चित गर्न र समकक्षताका लागि	केन्द्र स्तरीय परिषद वा प्रदेश स्तरीय संरचनाबाट

TVET को उत्तीर्ण दर न्यून हुनुका कारण र सुधारका उपाय

कारण	सुधारका उपायहरू
• समग्र विद्यालय शिक्षा र आधारभूत तहको ज्ञान क्षमताको कमी हुनु • शिक्षालय र विद्यालयको पूर्वाधार र सिकाइ सहजीकरणमा साधरण शिक्षा जस्तै हुनु • प्रशिक्षार्थी छनोट योग्यता र रूचीका आधारमा हुन नसक्नु	• विद्यालय शिक्षाको गुणस्तर सुधार, • शिक्षालयको पूर्वाधार सुधार गर्ने • प्रशिक्षण प्रकृयामा सुधार, • मूल्याङ्कन काम गर्ने सक्ने आधारमा गर्नुपर्ने सैध्दान्तिक कम गर्ने

Tec. stream र CTEVT को पाठ्यक्रम फरक गर्नु उचित हो वा होइन

हो वा होइन	सुधारका उपायहरू
• होइन	• समग्र पाठ्यक्रम NQF लाई आधार मानी पाठ्यक्रम विकास गर्ने • निजी क्षेत्र सहितको कार्यदलबाट दुबैको एउटै पाठ्यक्रम तयार गरी लागु गर्ने • Tec. stream को लाई बढाउन आवश्यक रहेको ११ र १२ मा OJT राख्न सकिन्छ की ? • सेमेष्टर सिस्टम गर्ने की ?

Diploma तहमा OJT को व्यवस्था उपयोगी हुने वा नहुने

हुने वा नहुने	कारण
• धेरै उपयोगी हुने	• प्राविधिक शिक्षा गरेर सिक्ने हो पढेर होइन • OJT कार्यस्थल वा उद्योगमै गराउदा कामसँग परिचित भइ सक्षमता हासिल गर्न सहयोगी हुन्छ • काम पाउन र दक्षतापूर्वक सम्पन्न गर्न सहज हुन्छ • गैरिखान सक्ने बनाउन

TLM तथा पाठ्यक्रम सम्बन्धी समस्याहरू

समस्याहरू	समाधान गर्न
• TLM उपलब्ध सर्वसुलभ नुहुन • महँगो हुनु • प्रशिक्षकहरू प्रविधिमैत्री नहुनु • सबै ठाउँमा प्रविधिको पहुँच नहुँदा प्रयोगमा कठिनाइ • शिक्षालयमा ल्याव र पुस्तकालयको उचित प्रवन्ध नहुनु • भएका सामग्रीको उपयुक्त प्रयोग नहुनु • सामग्रीमा भाषिक कठिनाइ	• NQF मा आधारित Curriculum विकास गर्ने • Text Book तयार गर्ने • पाठ्यपुस्तकमा अनुदान दिइ निशुल्क उपलब्ध गराउने • स्तरीय मापदण्ड तयार गरी पर्याप्त सामग्री सहितको ल्याव र पुस्तकालय सबै विद्यालयमा विकास गर्ने • सन्दर्भ सामग्रीको छनोट र प्रयोग गर्न प्रशिक्षक तालिम

प्रशिक्षक उपलव्धता

समस्याहरू	समाधान गर्ने
• सबै विषयमा योग्यता पुगेका प्रशिक्षक नपाउनु (Masters गरेको नपाउनु) • प्रशिक्षकको जागीरको सुरक्षा नुहुनु • तालिमको अभाव • प्रशिक्षकहरू प्रविधिमैत्री नहुनु • Exposure नहुनु	• भविश्यको प्रक्षेपण गरी स्थायी दरबन्दी विद्यार्थी सङ्ख्या अनुसार सृजना गर्ने • प्रशिक्षकको सेवाको स्थायीत्व गर्ने • तलव सुविधामा एकरूपता गर्ने • शिक्षण सम्बन्धी तालिम दिने • Exposure भ्रमण र तालिम दिने • Career path clear (career counseling) परिभाषित गर्ने

प्रशिक्षकको प्रकार वा प्रकृति

अवस्था	समाधान गर्ने
• Tec. stream मा स्थायी प्रशिक्षक सुन्य • CTEVT मा स्थायी दरबन्दी छ • Tec. stream को अधिकांश विषयमा न्यूनतम योग्यता एक वर्षे अनुभव भएकालाई मानिएको छ • सबै स्थानमा टिकाउन समस्या छ	• विद्यार्थी सङ्ख्या र विषयको आधारमा दरबन्दी सिर्जना गर्ने • विद्यालयको सञ्चालन आवश्यकताको आधारमा मात्र दिने • विद्यालय सञ्चालन गर्दा सबै पूर्वाधार सहित अनुदान दिने • सेवा आयोग मार्फत स्थायी गर्ने

प्रशिक्षक भर्नाका लागि प्रभावकारी संयन्त्र

- सेवा आयोगको व्यवस्था गर्ने
- सेवा आयोगले स्वीकृत गरेको पाठ्यक्रम अनुसार संयन्त्र र प्रकृयाको विकास गर्ने
- केन्द्र वा प्रदेशस्तरबाट सञ्चालन गर्ने

प्रशिक्षकको योग्यता बढाउन के गर्ने

अवस्था	समाधान गर्ने
• CTEVT का लागि दिईएको पर्याप्त छैन • Tec. stream का लाई दिइएको छैन	• TITI को प्राविधिक सहयोगमा सबै प्रदेशमा तालिम सञ्चलान गर्ने • माथिल्लो योग्यता बढाउन सुविधा दिने • प्रयोगात्मक अभ्यासका लागि कार्यस्थल वा

भौतिक पूर्वाधार

पूर्वाधारहरूको सूधार	
• साधरण भन्दा फरक कक्षाकोठाको व्यवस्था • प्रयोगशाला सबै विद्यार्थीलाई सहज हुने • प्रयोगशाला सञ्चालनमा कुनै प्राविधिक कठिनाई नहुने • नयाँ आविस्कार भएका प्रविधिहरूको जानकारी राख्न ।T को ल्याव सबै शिक्षालय र विद्यालयमा गर्ने • पर्याप्त प्रयोग गर्नपाउने सामग्रीहरू • प्रयोगशालामा काम गर्ने कर्मचारीको क्षमता विकास सहितको व्यवस्था	

License को व्यवस्था

आवश्यक छ वा छैन	कारण
• आवश्यक छ	• Teaching art पनि हो profession पनि हो • यसले योग्यतम र क्षमतावान प्रशिक्षक विकास गर्न सकिन्छ

व्यवहारिक प्रशिक्षणमा कस्तो सुधार हुनु पर्दछ

सुधार	
• ज्ञानलाई सीपमा रूपान्तरण गरेर सिक्ने वातावरणमा • प्रशिक्षकबाट सहजीकरण • समूहकार्य र प्रस्तुतीकरण • व्यक्तिगत प्रतिवेदन • स्थलगत अध्ययन र प्रतिवेदन	

कार्यस्थलमा आधारित प्रशिक्षण मोडेल के के हुने

- लागत साझेदारी
- पूर्ण सरकारी लगानी

OJT का अवसरहरू कसरी व्यवस्थापन गर्न सकिन्छ

- OJT का स्थान वा संस्थाहरू शिक्षालय वा विद्यालयले वार्षिक रूपमा अध्यावधिक गर्ने
- आन्तरिक र वाह्य सुपरीवेक्षकबाट मूल्याङकन गर्ने व्यवस्था गर्ने
- शिक्षालयले पर्याप्त न्यूनतम तयारी र अभिमुखीकरण गर्ने
- प्रशिक्षार्थीलाई न्यूनतम खाजा/ खान खर्च उपलब्ध गराउने

मूल्याङ्कन र प्रमाणीकरण

सुधार गर्नुपर्ने	तौर तरिका
• Formative evaluation • विद्यार्थीबाट प्रशिक्षकको मूल्याङ्कन गर्नु आवश्यक छ • सीप परीक्षण • परीक्षा प्रणाली र प्रश्नमा • आन्तरिक मूल्याङ्कन	• समस्या समाधान गराइ मूल्याङ्कन गर्ने • Tools को विकास गर्ने • प्रयोगात्मक र कार्यस्थलको अभ्यासमा गर्ने • काम गर्न सकेको आधारमा स्तर निर्धारण गर्ने • वाह्य अनुगमन गरी परीक्षाको वातावरण सुधार गर्ने

गुणस्तर वृध्दिका लागि

समस्या	समाधान
• पूर्वाधार कमी • योग्यता पुगेका प्रशिक्षकको कमी • शिक्षण वा प्रशिक्षण • परीक्षा प्रणाली • प्रशिक्षार्थीको पूर्व योग्यता	• पर्याप्त अभ्यास गरेर सिक्न मिल्ने भौतिक पूर्वाधार विकास गर्ने • योग्यता प्राप्त प्रशिक्षक उत्पादन र सेवा सुविधामा वृध्दि र मर्यादित बनाउने • प्राविधिक ज्ञान सीपमा केन्द्रित गर्ने र यसको लागि प्रशिक्षक प्रशिक्षण तालिम सञ्चालन गर्ने • कामको अभ्यास गरेर जाँच्ने मापदण्ड तयार गर्ने, प्रयोगात्मक परीक्षाको % बढाउने • सैध्दान्तिक परीक्षाको % घटाउने • समग्र शिक्षाको गुणस्तर सुधार गर्ने

दक्षता सुधार

- कार्यक्रम सञ्चालन गर्ने सस्थाको क्षमता अनुसार भर्ना कोटा निर्धारण
- प्रशिक्षण प्रकृयामा सुधार गर्ने
- सन्दर्भ सामग्री र पाठ्यपुस्तकहरू निशुल्क उपलब्ध गराउने
- निरन्तर मूल्याङ्कन र अभिलेखीकरण गर्ने
- संस्थागत रूपमा सिपलाई निरन्तर प्रयोग गर्ने वातावरण मिलाउने (school, industry, office,.....
- मौका परीक्षा समयमा सञ्चालन गर्ने
- रोजुगारीको लागि TVET प्रमाणपत्र प्राप्तलाई प्राथमिकता दिने र अनुगमन गर्ने
- उद्यमी बनाउन बिउ पुँजीको प्रवन्ध गर्ने

प्रशिक्षार्थीको क्षमता उद्योग बजारसँग मिल्ने छ तर कार्य विशिष्टीकरको कारण कार्यदक्षता अभाव छ

समस्या	समाधान
पाठ्यक्रम परिवर्तन गर्न १० वर्ष लाग्ने प्रविधि दिनदिनै परिवर्तन हुने, सक्षम प्राप्त व्यक्ति विदेश पलायन हुने	कारण TVET को पाठ्यक्रम परिवर्तन गर्ने, दक्ष जनशक्तिको लागि रोजगारीको सुनिश्चितताको लागि सुरक्षा प्रवन्ध गर्ने उद्योग संग समन्वय

आम्दानी बढाउन

- काम सम्बन्धी क्षमता अभिवृध्दि
- स्वरोजगार बनाउन गुणस्तरीय प्राविधिक ज्ञानको विकास
- बजार र लगानीको सुनिश्चितता
- औधोगिक व्यवसायमा प्रयोग हुने औजार उपकरणहरूको आविष्कार अनुसार सीप र कार्यदक्षता बढाउने
- पढ्दै कमाउदै कार्यक्रमलाई प्रयोगात्मक अभ्यास सँग जोड्ने

Outputs

- आवश्यकता भएका व्यक्तिलाई मात्र छोटो अवधीको तालिम दिन छनोटमा व्यापक प्रचार प्रसार तथा सहजीकरण गर्ने
- रोजगार बजारसँग जोडी आयवृध्दि गर्ने
- लामो समयका कार्यक्रमका लागि छात्रवृत्ति सङ्ख्या वृध्दि गर्ने
- सिकाइ र मूल्याङ्कन प्रकृयामा समयसापेक्ष सुधार
- Advance diploma को कोर्ष लागु गर्ने

सान्दर्भिकता

- तालिम लिने र काम गर्नेबेला अन्यत्र जानेकारण औधोगिक प्रशिक्षार्थी राख्न कठिन
- राष्ट्रिय र प्रदेश स्तरको सम्भाव्य उद्योगहरूको पहिचान र प्राथमिकीकरण गर्ने
- उद्योगको आवश्यकता अनुसार पाठ्यक्रम विकास गर्ने
- प्रशिक्षकको पुनर्ताजगी तालिम कार्यस्थल वा उद्योगमा गर्ने
- उद्योगको संभाव्यता र आवश्यकता अनुसार रोजगारका लागि विशिष्ट खालका TVET कार्यक्रम सञ्चालन गर्ने(longterm and short term)
- OJT coordination committee मा उद्योगी व्यवसायीको CNI, FNCCI जस्ता संस्थाहरूको प्रतिनिधित्व गराउने
- व्यवसायीसँग समन्वय गर्ने

आम्दानी बढाउने

- उद्योग अनुसार पाठ्यक्रम विकास गर्न समन्वय
- उद्योगको सक्षमता विकास गरी रोजगारी विस्तार गर्न उद्योगमैत्री नीतिगत व्यवस्था गर्ने
- उद्योगमा लगानी स्थीर प्रकारको बनाउनुपर्ने
- गुणस्तरीय प्रशिक्षार्थीको उत्पादन गरी उद्योगको उत्पादन र उत्पादकत्व बढाउने

रोजगारदर न्यून हुनुका कारण

- उद्योग व्यवसायको विस्तार कम
- तालिम प्राप्त भन्दा अनुभवी जनशक्तिको बढी कार्यदक्षता हुनु
- Supply and demand को तालमेल नहुनु(बजार माग र अवस्था अनुसार गुणस्तरीय जनशक्ति उत्पादन नहुनु)
- तालिम प्राप्त व्यक्तिको आम्दानी कमी हुनु
- उच्च शिक्षा अध्ययनमा लाग्नु
- तुलनात्मक रूपमा न्यून तलवहरू
- रोजगारको कम अवसर
- उच्च शिक्षा प्रतिको रूची बढ्दै जानु

रोजगारीदर बढाउन

- उद्योग व्यवसायको विस्तार
- अनुभवी प्रशिक्षक जनशक्तिको व्यवस्था गर्ने
- बजार माग र अवस्था अनुसार गुणस्तरीय जनशक्ति उत्पादन गर्न पाठ्यक्रम र प्रशिक्षणको व्यवस्था गर्ने
- योग्यता अनुसार न्यूनतम तलवको व्यवस्था गर्ने
- रोजगार मेलाहरू आयोजना गर्ने
- NQF अनुसार सक्षमता विकास गर्न

जिज्ञासाको लागि.....

धन्यवाद

समूह : ४

Governance (सुशासन)

सांगठनिक संरचना :

- संघीय परिषद
- प्रदेश परिषद
- स्थानीय समन्वय समिति

संघीय परिषद

वर्तमान ऐन नियममा रहेको व्यवस्थामा प्रदेश परिषदको कार्यकारी प्रमुख पदेन सदस्य रहने थप व्यवस्था गर्ने

प्रदेश परिषद

अध्यक्ष : सामाजिक विकास मन्त्री

स.सचीव : TVET प्रदेश कार्यालय प्रमुख

अन्य प्रतिनिधित्व :

- सम्बन्धित विषयगत मन्त्रालयका सचिव/महाशाखा प्रमुख
- सामाजिक विकास समिति सभापति
- सामाजिक विकास मन्त्रालय सचिव वा शिक्षा महाशाखा प्रमुख
- उद्योग वाणिज्य महासंघ
- क्षेत्रगत विषय विज्ञहरु
- प्राविधिक शिक्षालयहरु
- स्थानीय तहका प्रमुखहरु मध्ये १ महिला सहित २ जना

स्थानीय TVET समन्यव समिति

अध्यक्ष : स्थानीय पालिका प्रमुख

स.सचीव : शिक्षा शाखा प्रमुख

सदस्य : पालिका उप प्रमुख

सदस्य : सामाजिक विकास समिति संयोजक

सदस्य : प्राविधिक धारका विद्यालय मध्येबाट १ जना

सदस्य : उद्योग वाणिज्य संघ प्रतिनिधि

सदस्य : तालिम प्रदायक संस्था

सदस्य : प्रमुख प्रशासकीय अधिकृत

सदस्य : विषय विज्ञहरु

संघीय परिषदको कार्यक्षेत्र

- शिक्षालयको मापदण्ड निर्धारण
- राष्ट्रिय पाठ्यक्रम प्रारुप र पाठ्यक्रम ढाँचा तयारी
- गुणस्तर परीक्षण प्रतिवेदन तयार गरी भावी रणनीति निर्धारण
- परीक्षा सञ्चालन तथा प्रमाणीकरण
- बजेट व्यवस्थापन
- सीप परीक्षण
- शिक्षक नियुक्ति सम्बन्धि व्यवस्था

प्रदेश परिषदको कार्यक्षेत्र

- प्राविधिक शिक्षालयको अनुमति, सञ्चालन र व्यवस्थापन
- सबै प्रकारका शिक्षालयहरुको समन्वय
- बजेट तथा कार्यक्रम व्यवस्थापन
- अनुगमन, निरीक्षण
- क्षमता विकास
- परीक्षा सम्बन्धि समन्वय तथा व्यवस्थापन

स्थानीय समन्वय समितिको कार्यक्षेत्र

- शिक्षालय तथा प्रशिक्षकको बजेट व्यवस्थापन तथा निकाशा
- अनुगमन, निरीक्षण र सुपरीवेक्षण
- छोटा अवधिका तालिम सञ्चालन
- सीप परीक्षणमा समन्वय र सहयोग
- प्राविधिक शिक्षालय अनुमतिका लागि सिफारिस
- रिक्त शिक्षक पदमा तत्काल करारमा शिक्षक व्यवस्थापन

Group : 4

सहभागीहरु :

- राजेन्द्र वुढाथोकी
- नवराज कोईराला
- गोपाल प्रसाद दाहाल
- योगेश्वर भट्टराई
- टेकनारायण शाह
- मेदिनी घिमिरे

थप सुझावका लागि अनुरोध सहित

धन्यवाद

Governance (सुशासन)

सांगठनिक संरचना

संघ :- वर्तमान ऐन नियममा रहेको व्यवस्थामा प्रदेश परिषदको कार्यकारी प्रमुख पदेन सदस्य रहने थप व्यवस्था गर्ने

प्रदेश :- TVET प्रदेश परिषद देहाय अनुसार रहनसक्ने

अध्यक्ष - शिक्षा हेर्ने मन्त्री (सा.वि.मन्त्रालय)

स.सचिव - TVET प्रदेश कार्यालय प्रमुख

अन्य प्रतिनिधित्व गराउनुपर्ने क्षेत्र :

* सा.वि.म. सचिव, शिक्षा महाशाखा प्रमुख
* सम्बन्धित विषयगत मन्त्रालय # उद्योग # रोजगार # श्रम # पर्यटन # स्वास्थ्य
* उद्योग वाणिज्य महासंघ
* क्षेत्रगत विषय विज्ञहरु
* प्राविधिक शिक्षालयहरु
* स्थानीय तहका प्रमुखहरु मध्ये २ जना
* सामाजिक विकास समिति संयोजक

सचिव / महाशाखा प्रमुख ←

स्थानीय :- TVET समन्वय समिति

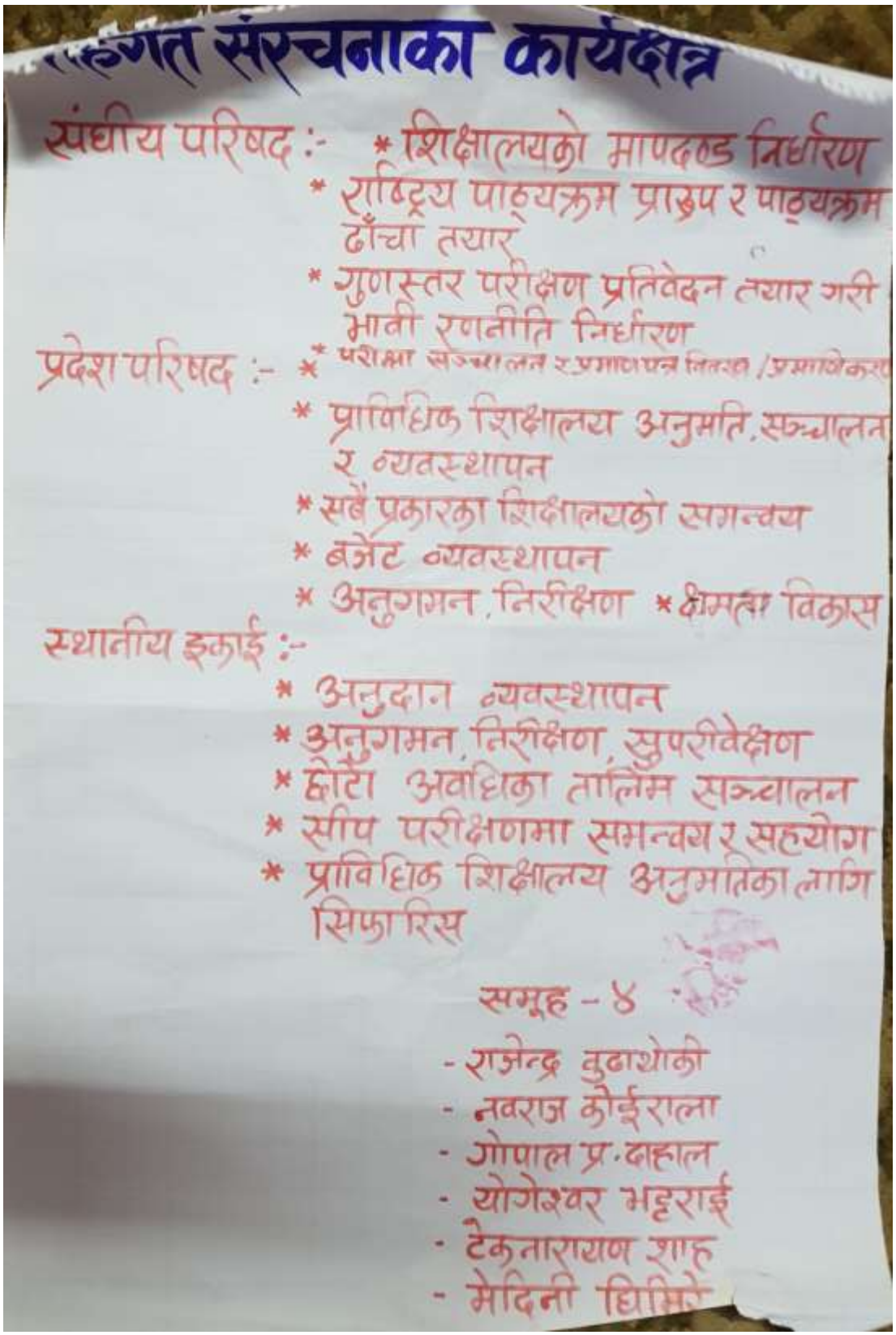
अध्यक्ष : पालिका प्रमुख

स.सचिव : शिक्षा प्रमुख

सदस्य :- उप प्रमुख

" :- सामाजिक विकास समिति संयोजक

संलग्नता :- प्राविधिक शिक्षालय प्रमुख
उद्योग वाणिज्य संघ प्रतिनिधि
तालिम प्रदायक संस्था प्रतिनिधि
प्रमुख प्रशासकीय अधिकृत
विषय विज्ञहरु


गत संरचनाका कार्यक्षेत्र
संघीय परिषद :- * शिक्षालयको मापदण्ड निर्धारण
* राष्ट्रिय पाठ्यक्रम प्रारुप र पाठ्यक्रम ढाँचा तयार
* गुणस्तर परीक्षण प्रतिवेदन तयार गरी भावी रणनीति निर्धारण
प्रदेश परिषद :- *
* प्राविधिक शिक्षालय अनुमति, सञ्चालन र व्यवस्थापन
* सबै प्रकारका शिक्षालयको समन्वय
* बजेट व्यवस्थापन
* अनुगमन, निरीक्षण * क्षमता विकास
स्थानीय इकाई :-
* अनुदान व्यवस्थापन
* अनुगमन, निरीक्षण, सुपरीवेक्षण
* छोटो अवधिका तालिम सञ्चालन
* सीप परीक्षणमा समन्वय र सहयोग
* प्राविधिक शिक्षालय अनुमतिका लागि सिफारिस
समूह - ४
- राजेन्द्र बुढाथोकी
- नवराज कोईराला
- गोपाल प्र. दाहाल
- योगेश्वर भट्टराई
- टेकनारायण शाह
- मेदिनी घिमिरे

ब्यवस्थापन तथा क्षमता विकास समुह ५ को तर्फवाट सवैमा हार्दिक अभिवादन

विद्यालय ब्यवस्थापन को क्षमता विकास

- वि ब्य स लाई विद्यमान शिक्षा सम्वन्धी ऐन कानूनको अभिमुखीकरण
- वि ब्य स लाई आफ्नो काम कर्तब्य र अधिकारको बोध गराउने
- अभिभावकलाई अभिभावक शिक्षा प्रदान गर्ने
- शिक्षक अभिभावक संघलाई क्रियासिल बनाउने
- प्र अ लाई जिम्मेवार वनाउने

ब्यवस्थापन राम्रो बनाउन कस्ता तालिम प्रदान गर्ने ?

- वि ब्य स र शिक्षक अभिभावकहरुलाई छोटो अवधिको क्षमता विकास तालिम
- प्र अ लाई १ महिने प्र अ ब्यवस्थापन तालिम
- समय समयमा पुनर्ताजगी तालिमहरु

प्रशिक्षक गुणस्तर

- योग्य प्रशिक्षकको छनौट
- स्पष्ट सेवा सर्त र सुविधा एवं स्थायित्व
- दुर्गम क्षेत्रमा थप सुविधाको ब्यवस्था
- तालिम एवं क्षमता विकास सम्वन्धी कार्यक्रम संचालन गर्ने

OJT

- OJT मा सहभागी हुनेलाई खाजा सहितको आर्थिक सुविधाको ब्यवस्था
- OJT लाई उप्पादनमूलक कार्यसँग जोड्ने
- सम्वन्धित निकायहरुवाट प्रभावकारी निरीक्षण अनुगमन
- OJT गर्ने संस्था, उद्योग, फर्महरुलाई अभिमुखीकरण ब्यवस्था र प्रभावकारी समन्वय
- मूल्याङ्कनको लागि अन्तराष्ट्रिय स्तरको मापदण्ड हुनु पर्ने

रोजगार

- बजार वा आवस्यकताका आधारमा मात्र प्राविधिक शिक्षाको अनुमती/ स्वीकृती दिने
- प्राविधिक जनशक्तिलाई रोजगारीको सुनिश्चितता
- कामको सम्मान हुने वातावरण तयार गर्नु पर्ने

विद्यालयलाई वजेटको सुनिश्चितता

- माध्यमिक तह सम्मको शिक्षा निः शुल्क हुने राज्यको नीति भएकोले संघ, प्रदेश र स्थानिय तहले कक्षा १२ सम्मको प्राविधिक शिक्षाका लागि आवस्यक बजेटको ब्यवस्थापन गर्ने
- संघ ५०, प्रदेश २० र स्थानिय तह ३० प्रतिशतले हुने गरी बजेट ब्यस्थापन गर्ने
- शिक्षा तथा मानव स्रोत विकास केन्द्र वा सिटिइभिटी मध्ये एकवाट एकद्वार प्रणालीवाट प्राविधिक शिक्षा संचालन ब्यवस्थापन गर्ने ।

समुह ५ मा रहेका सहभागीहरु

- राजकुमार वि क
- सिताराम राई
- गगन श्रेष्ठ
- सुरेश मल्ल
- सेमन्त गौतम

Annex 9: Guiding questions for Group Work

;':f'wf/sf lf]qx?	;:ffGble{s k|Zgx?
;d"x !	**kx"r / la:tf/**
kx"r	• 2078 sf] tYof+ssf] cfwf/df x]g]{ xf] eg TEVT df egf{b/ Hofb} g} Go"g 5 . egf{b/ a9fpg s] s:tf ultljlwn] ;3fp k'/\ofpg ;Sb5 <
	• TVET df cWoog u/]sf k|lzIffyL{x? (Technical Stream of CEHRD, Diploma and Pre-diploma of CTEVT) nfO{ pRr lzIff k|fKt ug{ kx'Frdf slQsf] ;lhnf] ePsf] dxz'z ug'{ ePsf] 5 <
	• n}lËs ;dfgtf / ;fdflhs ;dfj]zLs/0f (GESI) sf nflu s] s:tf k|fjwfgx? nfu' ul/g' pko'Qm x'G5 <
	• g]kfndf TVET sf] p2]Zox¿ s] x'g' pko'Qm xf]nfM /f]huf/L, jf z}lIfs of]Uotf jf b'a} <
la:tf/	• TVET ;~rfng u/]sf ;+:yfx?sf] ;+Vofsf] cfwf/df TVET nfO{ yk lj:tf/ ug'{ cfjZos 5 <
	• Diploma txeGbf dflyNnf] txdf TVET cWoogsf lf]qx? ;~rfng ul/g' cfjZos 5 < olb cfjZos 5 eg] gofF lf]qx? s] s] x'g ;Sb5g\ <
	• xfnsf txeGbf dfly (Vertical expansion) tyf lIfltlhs/0f (Horizontal expansion) df s]lGb|t cWoogsf ljifoj:t'x? s;/L lj:tf/ ug{ ;lsG5 <
;d"x @	**u'0f:t/**
	• tkfO{+sf] larf/df ;+:yf tyf sfo{qmdsf] accreditation ul/g' cfjZos 5 < olb 5 eg] s] sf/0fn] o;sf] cfjZostf dxz'z ug'{ ePsf] 5 <
	• TVET df k|lzIffyL{x?sf] pQL0f{ b/ Go"g 5 . o;f] x'g'sf d'Vo sf/0fx? s] x'g ;Sb5 < pQL0f{ b/ a[l4 ug{ s] s:tf pkfox? nfu' ug{ ;lsG5 <
kf7\oqmd	• CEHRD sf] Technical Stream tyf CTEVT sf] Diploma tx cGtu{tsf] b'O{ km/s kf7\oqmdx? nfu' ul/g' plrt xf] jf xf]Og < cfkm\gf] ;d"xsf] larf/ k|;t't ug'{xf];\ .
	• Diploma txsf] kf7\oqmddf OJT sf] af/]df Joj:yf ul/g' slQsf] pkof]uL x'g ;Sb5 < cfkm\gf] ;d'xsf] ljrf/ k|t't ug'{xf];\ .
	• TLM tyf kf7\ok':ts ;DalGw ;d:ofx? s] s] x'g\ < tL ;d:ofx? s;/L ;Daf]wg ug{ ;lsG5 <

k|lzIfssf] Joj:yfkg	• k|lzIfssf] Joj:yfkg s;/L ;'wf/ ug{ ;lsG5 < • clxn]sf] cj:yfdf :yfoL k|lzIfs, ;]jf s/f/, c:yfoL k|lzIfs / c+zsflng k|lzIfssf] efu (share) s:tf] 5 < • k|lzIfs Joj:yfkgsf cGo d'Vo r'gf}tLx? s] x'g\ < - k|lzIfssf] b/aGbL, of]Uotf, tfnLd ====_ • k|lzIfs egf{sf] nflu k|efjsf/L ;+oGq s] x'g ;Sb5 < • k|lzIfssf] of]Uotf a9fpg s] s:tf] Joj:yf ckgfpg ;lsG5 < • k|lzIfssf] tflndsf] Joj:yfkg s;/L ug{ ;lsG5 < • clxn] x'Fb} cfPsf] k|lzIfssf] Jofj;flos ljsf; tfnLd kof{Kt 5 jf cGo k|fljlws k|lzIf0f jf Jofj;flos ;Lk :t/j[l4 vfnsf] tflndx? x'g' h?/L 5 < • k|lzIfssf] nflu nfO;]G;sf] k|0ffnL cfjZos 5 < olb 5 eg] lsg <
ef}lts k"jf{wf/	• lzIffnosf] ef}lts k"jf{wf/ / k|of]uzfnfsf] nflu s] s:tf] ;'wf/ x'g' cfjZos 5 <
	• k|lzIffyL{x?df /fd|f] Ifdtf ljsf; ug{ Jojxfl/s k|lzIf0fdf (practical training part) s:tf] ;'wf/ x'g' kb{5 <
sfo{:yndf cfwfl/t k|lzIf0f df]8]n	• sfo{:yndf cfwfl/t k|lzIf0f df]8]nx? s] s] x'g ;Sb5g\ < • k|lzIffyL{x?nfO{ jf:tljs 7fpFdf sfd u/]/ l;Sg] (OJT) cj;/x? s;/L Joj:yf x'g' kb{5 <
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Annex 10a: Workforce Projection Table (Scenario 1: Planned Growth)

Year	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88
Sectoral Growth	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Human health and social work activities	6.53	10.5	10.5	10.5	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Agriculture, forestry and fishing	2.64	5.4	5.4	5.4	4.9	4.9	4.9	4.9	4.9	5.0	5.0
Engineering Replated	6.37	12.2	12.2	12.2	14.9	14.9	14.9	14.9	14.9	15.0	15.0
Accommodation and food service activities	11.20	17	17	17	6.2	6.2	6.2	6.2	6.2	8.0	8.0
Projection											
Health	120016	132617	146542	161929	178608	197004	217296	239677	264364	291593	321627
Agriculture and Forestry	1599319	1685683	1776709	1872652	1964412	2060668	2161641	2267561	2378672	2497605	2622485
Engineering	1157363	1298561	1456985	1634737	1878313	2158182	2479751	2849234	3273770	3764835	4329561
Hospitality	54637	63926	74793	87508	92933	98695	104814	111313	118214	127671	137885

Cummulative Projection (2022-2031)

Year	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88
Sector/Course	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Health	**120016**	**132617**	**146542**	**161929**	**178608**	**197004**	**217296**	**239677**	**264364**	**291593**	**321627**
Short Term	26476	29255	32327	35722	39401	43459	47936	52873	58319	64326	70951
Pre Diploma	33437	36948	40827	45114	49761	54886	60540	66775	73653	81239	89607
Diploma	60103	66414	73388	81093	89446	98659	108821	120029	132392	146028	161069
Agriculture and Forestry	**1599319**	**1685683**	**1776709**	**1872652**	**1964412**	**2060668**	**2161641**	**2267561**	**2378672**	**2497605**	**2622485**
Short Term	1322298	1393702	1468962	1548285	1624151	1703735	1787218	1874792	1966656	2064989	2168239
Pre Diploma	216039	227705	240001	252961	265356	278358	291998	306306	321315	337381	354250
Diploma	60983	64276	67747	71405	74904	78575	82425	86464	90700	95235	99997
Engineering	**1157363**	**1298561**	**1456985**	**1634737**	**1878313**	**2158182**	**2479751**	**2849234**	**3273770**	**3764835**	**4329561**
Short Term	794761	891722	1000512	1122574	1289838	1482024	1702845	1956569	2248098	2585313	2973110
Pre Diploma	292121	327760	367747	412612	474091	544731	625896	719154	826308	950255	1092793
Diploma	70480	79079	88726	99551	114384	131427	151010	173510	199363	229268	263658

Hospitality	**54637**	**63926**	**74793**	**87508**	**92933**	**98695**	**104814**	**111313**	**118214**	**127671**	**137885**
Short Term	29858	34934	40873	47821	50786	53935	57279	60830	64602	69770	75351
Pre Diploma	21513	25171	29450	34456	36592	38861	41271	43829	46547	50270	54292
Diploma	3266	3821	4471	5230	5555	5899	6265	6653	7066	7631	8242
Total	**2931335**	**3180786**	**3455030**	**3756826**	**4114266**	**4514549**	**4963502**	**5467785**	**6035020**	**6681705**	**7411559**
Short Term	2173392	2349613	2542674	2754403	3004177	3283153	3595278	3945064	4337675	4784397	5287651
Pre Diploma	563110	617583	678025	745143	825801	916837	1019704	1136065	1267823	1419145	1590941
Diploma	194832	213590	234332	257280	284289	314560	348520	386656	429522	478163	532966

Annual Labour Force Projection

Year	**2077-78**	**2078-79**	**2079-80**	**2080-81**	**2081-82**	**2082-83**	**2083-84**	**2084-85**	**2085-86**	**2086-87**	**2087-88**
Sector/Course	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Health	**7353**	**12602**	**13925**	**15387**	**16679**	**18397**	**20291**	**22381**	**24687**	**27229**	**30034**
Short Term	1622	2780	3072	3394	3679	4058	4476	4937	5446	6007	6626
Pre Diploma	2049	3511	3880	4287	4647	5125	5653	6236	6878	7586	8368
Diploma	3683	6311	6973	7706	8353	9213	10162	11209	12363	13636	15041
Agriculture and Forestry	**41118**	**86363**	**91027**	**95942**	**91760**	**96256**	**100973**	**105920**	**111110**	**118934**	**124880**
Short Term	33995	71404	75260	79324	75866	79583	83483	87574	91865	98333	103249
Pre Diploma	5554	11666	12296	12960	12395	13002	13640	14308	15009	16066	16869
Diploma	1568	3293	3471	3658	3499	3670	3850	4039	4237	4535	4762
Engineering	**69293**	**141198**	**158424**	**177752**	**243576**	**279869**	**321569**	**369483**	**424536**	**491065**	**564725**
Short Term	47583	96961	108790	122062	167264	192186	220822	253724	291529	337215	387797
Pre Diploma	17490	35639	39987	44865	61479	70640	81165	93258	107154	123946	142538
Diploma	4220	8599	9648	10825	14833	17043	19583	22500	25853	29905	34390
Hospitality	**5503**	**9288**	**10867**	**12715**	**5425**	**5762**	**6119**	**6498**	**6901**	**9457**	**10214**
Short Term	3007	5076	5939	6948	2965	3149	3344	3551	3771	5168	5582
Pre Diploma	2167	3657	4279	5006	2136	2269	2409	2559	2717	3724	4022
Diploma	329	555	650	760	324	344	366	388	413	565	610
Total	**123267**	**249451**	**274243**	**301796**	**357440**	**400283**	**448952**	**504283**	**567234**	**646686**	**729853**

Year	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88
Sector/Course	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Short Term	86208	176221	193061	211729	249774	278976	312125	349786	392611	446722	503253
Pre Diploma	27259	54473	60441	67118	80657	91036	102867	116361	131758	151322	171797
Diploma	9799	18758	20742	22949	27009	30271	33960	38136	42865	48641	54803
Advance Diploma		1837	3517	3889	4303	5064	5676	6368	7151	8037	9120

Methodology of this data projection has been done in Annex: 10b.

Annex 10b: Occupation Workforce projection (2023-2032) for the TVET sector in Nepal

- This task aims to foresight the future requirements of occupational skills by sectors for the next ten years. The economy's complexity means it is impossible to make accurate projections of future skill needs in any detail or for more than a few years into the future.
- A report (Samartha 2019) quoting MOEST says, "demand forecast is not possible with the existing system; thus, system improvisation is therefore required."
- Methodologically, it is broadly accepted that purely quantitative methods and their results cannot dominate this kind of foresight activity. Therefore, assumption and normative interpretation of the future and relationships across variables factor heavily in the projection.
- The user of this projection should not try to match training to projected skills needs in any precise way; they should instead focus on distinguishing skills that are in growing demand from those in declining demand, and on skills that take a long time to learn (teach)
- The table below shows the major occupational groups and corresponding skills requirements for entrance to those job tasks in each specific occupational groups and corresponding skills requirements for entrance to those job tasks in each specific group.

Table 1: Occupation groups with Skill's level and qualification level

Major occupation group (with I/NSCO code)	**Skill level[5] [6]**	**Commensurate level of qualification**

[5] *As per ISCO-08, Skill is defined as the ability to carry out the tasks and duties of a given job. Skill level is defined as a function of the complexity and range of tasks and duties to be performed in an occupation based on (a) the typical or characteristic tasks performed at each skill level (b) the types of skill required (in broad terms) and (c) the typical occupations classified at that skill level.*

[6] *The four ISCO-08 skill levels can be mapped to levels of education as below:*

Table Name????

Skill Level	Education Qualification (ISCED 2011)	ISCED 2011	
4	6 Second stage of tertiary education (leading to an advanced research qualification)		
4	5a First stage of tertiary education, 1st degree (medium duration)		
3	5b First stage of tertiary education (short or medium duration)		
2	4 post-secondary, non-tertiary education	"building on secondary education, preparing for labour market entry as well as tertiary education."	Diploma (10+3 years)
2	3 Upper secondary level of education	8-11 years of schooling	Pre-diploma (10+1.6 years)

1 - Managers	High (3, 4)	Bachelor's degree equivalence or higher; Diploma
2 - Professionals	High (3, 4)	
3 - Technicians and associate professionals	High (3, 4)	
4 - Clerical support workers	Medium (2)	Pre-Diploma
5 - Service and sales workers	Medium (2)	
6 - Skilled agricultural, forestry and fishery workers	Medium (2)	
7 - Craft and related trades workers	Medium (2)	
8 - Plant and machine operators, and assemblers	Medium (2)	
9 - Elementary occupations	Low (1)	Certificate level (Short-term courses); Technical Stream
0 - Armed forces occupations	Not classified	

Table 2: Current state of occupation by skills level

Occupation (ISCO-08) - main job	1 - Skill level 1 (low)	2 - Skill level 2 (medium)	3 - Skill levels 3 and 4 (high)	4 - Not elsewhere classified
1 - Managers	0	0	84543.3	0
2 - Professionals	0	0	579799.3	0
3 - Technicians and associate professionals	0	0	314588.2	0
4 - Clerical support workers	0	220354.6	0	0
5 - Service and sales workers	0	1685521.4	0	0
6 - Skilled agricultural, forestry and fishery workers	0	968230.1	0	0
7 - Craft and related trades workers	0	1389546	0	0
8 - Plant and machine operators, and assemblers	0	382277.1	0	0
9 - Elementary occupations	1439476.4	0	0	0
0 - Armed forces occupations	0	0	0	21857.9
Total	1439476.4	4645929.2	978930.8	21857.9

- The task aims to make projections of the following for sectors by skill level.
  - Health
  - Engineering
  - Hospitality
  - Agriculture and Forestry

- Next is the stepwise description of the projection methods and results.

Step 1: Assessing baseline employment scenario (2017-18)

- The only large-scale reliable representative survey data available on occupational skill is National Labour Force Survey 2017-18 (NLFS), which shall provide a baseline employment scenario.
- The NLFS provides employment information of 366 occupations (4-digit level) aggregated (2-digit level) by skill levels. The table below shows 40 occupations (other than not classified armed services) by three skill levels.

2	2 Lower secondary level of education	6-8 years of schooling	TVET Stream/Short Term Courses
1	1 Primary level of education	5 years of schooling	

Table 3: Occupations and Skill levels

Occupation (ISCO-08), 2 digit level - main job	1 - Skill level 1 (low)	2 - Skill level 2 (medium)	3 - Skill levels 3 and 4 (high)	4 - Not elsewhere classified
01 - Commissioned armed forces officers	0	0	0	2078
02 - Non-commissioned armed forces officers	0	0	0	1093
03 - Armed forces occupations, other ranks	0	0	0	18687
11 - Chief executives, senior officials and legislators	0	0	20137	0
12 - Administrative and commercial managers	0	0	14149	0
13 - Production and specialised services managers	0	0	33755	0
14 - Hospitality, retail and other services managers	0	0	16502	0
21 - Science and engineering professionals	0	0	16615	0
22 - Health professionals	0	0	31577	0
23 - Teaching professionals	0	0	458479	0
24 - Business and administration professionals	0	0	33634	0
25 - Information and communications technology professionals	0	0	1454	0
26 - Legal, social and cultural professionals	0	0	38041	0
31 - Science and engineering associate professionals	0	0	58098	0
32 - Health associate professionals	0	0	104972	0
33 - Business and administration associate professionals	0	0	107903	0
34 - Legal, social, cultural and related associate professionals	0	0	26645	0
35 - Information and communications technicians	0	0	16970	0
41 - General and keyboard clerks	0	55436	0	0
42 - Customer services clerks	0	79711	0	0
43 - Numerical and material recording clerks	0	38177	0	0
44 - Other clerical support workers	0	47031	0	0
51 - Personal service workers	0	229047	0	0
52 - Sales workers	0	1368368	0	0
53 - Personal care workers	0	22692	0	0
54 - Protective services workers	0	65414	0	0
61 - Market-oriented skilled agricultural workers	0	917936	0	0
62 - Market-oriented skilled forestry, fishery and hunting workers	0	11285	0	0
63 - Subsistence farmers, fishers, hunters and gatherers	0	39010	0	0
71 - Building and related trades workers, excluding electricians	0	652014	0	0
72 - Metal, machinery and related trades workers	0	138864	0	0
73 - Handicraft and printing workers	0	159882	0	0
74 - Electrical and electronic trades workers	0	56546	0	0
75 - Food processing, wood working, garment and other craft and related trades	0	382240	0	0
81 - Stationary plant and machine operators	0	96115	0	0
82 - Assemblers	0	24320	0	0
83 - Drivers and mobile plant operators	0	261842	0	0
91 - Cleaners and helpers	166171	0	0	0
92 - Agricultural, forestry and fishery labourers	490080	0	0	0
93 - Labourers in mining, construction, manufacturing and transport	634366	0	0	0
94 - Food preparation assistants	61184	0	0	0
95 - Street and related sales and service workers	7264	0	0	0
96 - Refuse workers and other elementary workers	80411	0	0	0
Total	**1439476**	**4645929**	**978931**	**21858**

Step 2: Aggregating sector-wise employment status

- The occupations related to four target sectors (Health, Agriculture and Forestry, Engineering and Hospitality) are further grouped to calculate aggregate employment. Four areas/sectors are selected to make projections.

Table 4: Workforce by sectors and Skills level

Sector	Skill level 1 (low)	Skill level 2 (medium)	Skill levels 3 and 4 (high)	TOTAL
Health			**136,550**	**136,550**
22 - Health professionals			*31577*	
32 - Health associate professionals			*104972*	
Agriculture	**490,080**	**968,230**		**1,458,310**
92 - Agricultural, forestry and fishery labourers	*490080*			
61 - Market-oriented skilled agricultural workers		*917936*		
62 - Market-oriented skilled forestry, fishery and hunting workers		*11285*		
63 - Subsistence farmers, fishers, hunters and gatherers		*39010*		
Engineering		**438,823**	**35,039**	**473,862**
74 - Electrical and electronic trades workers		*56545.9*		
83 - Drivers and mobile plant operators		*261841.5*		
81 - Stationary plant and machine operators		*96115.4*		
82 - Assemblers		*24320.2*		
21 - Science and engineering professionals			*16615.3*	
25 - Information and communications technology professionals			*1453.8*	
35 - Information and communications technicians			*16969.9*	
Hospitality	**61,184**		**16,502**	**77,686**
94 - Food preparation assistants	*61184.2*			
14 - Hospitality, retail and other services managers			*16501.8*	
TOTAL	**551,264**	**1,407,053**	**188,090**	**2,146,408**

Step 3: calculating sector-wise skill distribution employment status

- The data shows, for example, all occupations within health sectors are of skill level 3 and 4 or high skills, whereas two-thirds of employment in agriculture are skill level 2 or medium

skill and the remaining one-third are skill level 1 or low skill. (Note: NLFS only includes agricultural and forestry sector labourers who have engaged in market operation as producers or labourers and excludes those in the subsistence agriculture activities for non-market purposes)

- The table below shows the distribution of skill levels across the four-target sector.

Table 5: Distribution of skill levels across the four-target sector

Sector	Skill level 1 (low)	Skill level 2 (medium)	Skill levels 3 and 4 (high)
Health			100%
Agriculture	34%	66%	
Engineering		93%	7%
Hospitality	79%		21%
Average of above four sectors	**26%**	**66%**	**9%**
Average of all sectors in the economy	**20%**	**66%**	**14%**

Step 4: Projecting target sector employment growth

- The employment growth in a particular sector is projected based on the growth of that industry/sector. While employment and sectoral economic growth are highly correlated, we understand that growth is **NOT** the only factor influencing future employment and skills requirements.
- In fact, the structure of the population, technological progress, adaptation and productivity, composition of the economy, development of domestic private sectors etc. greatly impacts the employment level and its sectoral and skill composition.
- We assume that some of the structural factors are considered while making projections about the economy by the planners (for example, in Fifteenth Plan, SDG targets); other factors could not be considered due to lack of sufficient data at the desired disaggregation.
- Hence, for the projection, sectoral economic growth is considered a major driver of the demand for skilled manpower in the future. That is, agriculture manpower demand is driven by the agriculture sector's growth, health manpower by growth in 'human health and social work activities in the economy and so forth.
- After the baseline of 2017-18, actual sectoral growth (produced by CBS) has been taken for the period up to 2021; from the fifteenth plan for the period of 2022-2024 and a combination of long-term projection in the fifteenth plan and SDG 2030 for the period of 2025-2032.
- Based on the sectoral growth rate, employment in the target sector is projected for 2022-2032 in a linear way, as shown below.

Table 6: Projecting target sector employment growth

Year	2074-75	2075-76	2076-77	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88
Sectoral Growth	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Human health and social work activities	5.87	6.69	5.20	6.53	10.5	10.5	10.5	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Agriculture, forestry and fishing	2.61	5.16	2.23	2.64	5.4	5.4	5.4	4.9	4.9	4.9	4.9	4.9	5.0	5.0
Engineering Replated	14.51	12.71	-7.18	6.37	12.2	12.2	12.2	14.9	14.9	14.9	14.9	14.9	15.0	15.0
Accommodation and food service activities	12.21	9.92	-36.97	11.20	17	17	17	6.2	6.2	6.2	6.2	6.2	8.0	8.0
Health	136550	145685	153260	163263	180406	199349	220280	242969	267995	295598	326045	359628	396669	437526
Agriculture	1458310	1533514	1567770	1609140	1696033	1787619	1884150	1976474	2073321	2174914	2281485	2393277	2512941	2638588
Engineering	473862	534067	495707	527276	591604	663779	744760	855730	983233	1129735	1298065	1491477	1715199	1972479
Hospitality	77686	85394	53820	59847	70021	81925	95852	101795	108106	114809	121927	129487	139845	151033

Step 5: Projecting target sector employment growth

- Based on the projections made in step 4, the skill levels further disaggregate sectoral employment.
- For the disaggregation, we use the same proportion of skills calculated in step 3. The assumption is that the economy's composition would remain the same and demand similar skill levels within a sector. This is a huge assumption to make, but due to the non-availability of reasonable macroeconomic scenario projection at the macroeconomic level, we follow the linear distribution of skill level.
- Hence, each target sector (Health, Agriculture, Engineering and Hospitality) is further disaggregated by the program Short-term, Pre-diploma and Diploma.

- For the advance diploma, the potential demand is assumed to be 25% of graduates of diploma programs (the graduation rate for diploma program is targeted at 75%) based on experts' opinion.
- Hence, the annual projection by sectors and qualification level is calculated as table 7:

Table 7: Projecting target sector employment growth

Year	2077-78	2078-79	2079-80	2080-81	2081-82	2082-83	2083-84	2084-85	2085-86	2086-87	2087-88
Sector/Course	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Health	**7353**	**12602**	**13925**	**15387**	**16679**	**18397**	**20291**	**22381**	**24687**	**27229**	**30034**
Short Term	*1622*	*2780*	*3072*	*3394*	*3679*	*4058*	*4476*	*4937*	*5446*	*6007*	*6626*
Pre Diploma	*2049*	*3511*	*3880*	*4287*	*4647*	*5125*	*5653*	*6236*	*6878*	*7586*	*8368*
Diploma	*3683*	*6311*	*6973*	*7706*	*8353*	*9213*	*10162*	*11209*	*12363*	*13636*	*15041*
Agriculture and Forestry	**41118**	**86363**	**91027**	**95942**	**91760**	**96256**	**100973**	**105920**	**111110**	**118934**	**124880**
Short Term	*33995*	*71404*	*75260*	*79324*	*75866*	*79583*	*83483*	*87574*	*91865*	*98333*	*103249*
Pre Diploma	*5554*	*11666*	*12296*	*12960*	*12395*	*13002*	*13640*	*14308*	*15009*	*16066*	*16869*
Diploma	*1568*	*3293*	*3471*	*3658*	*3499*	*3670*	*3850*	*4039*	*4237*	*4535*	*4762*
Engineering	**69293**	**141198**	**158424**	**177752**	**243576**	**279869**	**321569**	**369483**	**424536**	**491065**	**564725**
Short Term	*47583*	*96961*	*108790*	*122062*	*167264*	*192186*	*220822*	*253724*	*291529*	*337215*	*387797*
Pre Diploma	*17490*	*35639*	*39987*	*44865*	*61479*	*70640*	*81165*	*93258*	*107154*	*123946*	*142538*
Diploma	*4220*	*8599*	*9648*	*10825*	*14833*	*17043*	*19583*	*22500*	*25853*	*29905*	*34390*
Hospitality	**5503**	**9288**	**10867**	**12715**	**5425**	**5762**	**6119**	**6498**	**6901**	**9457**	**10214**
Short Term	*3007*	*5076*	*5939*	*6948*	*2965*	*3149*	*3344*	*3551*	*3771*	*5168*	*5582*
Pre Diploma	*2167*	*3657*	*4279*	*5006*	*2136*	*2269*	*2409*	*2559*	*2717*	*3724*	*4022*
Diploma	*329*	*555*	*650*	*760*	*324*	*344*	*366*	*388*	*413*	*565*	*610*
Total	**123267**	**249451**	**274243**	**301796**	**357440**	**400283**	**448952**	**504283**	**567234**	**646686**	**729853**
Short Term	*86208*	*176221*	*193061*	*211729*	*249774*	*278976*	*312125*	*349786*	*392611*	*446722*	*503253*
Pre Diploma	*27259*	*54473*	*60441*	*67118*	*80657*	*91036*	*102867*	*116361*	*131758*	*151322*	*171797*
Diploma	*9799*	*18758*	*20742*	*22949*	*27009*	*30271*	*33960*	*38136*	*42865*	*48641*	*54803*
Advance Diploma		*1837*	*3517*	*3889*	*4303*	*5064*	*5676*	*6368*	*7151*	*8037*	*9120*

A note on projection:

- The projections of the levels of employment are only moderately reliable at an aggregate level. Reliability fell as projections were provided at a more detailed level, disaggregated by occupation and by skill level.
- Reliability is too low for projections to be valuable for planning TVET capacity at specific skills or occupations. Reliability falls as the forecast period increases.
- Therefore, the projection number needs to be combined with other information sources, such as the expected growth or decline of an occupation, technology use and labour replacement, etc.
- The projection period is better confined to around five years; maybe update them regularly with the latest information (push for NLFS to be undertaken more frequently, at least at five years interval).
- In order to make a more accurate projection, we need to undertake separate, bottom-up, high-quality studies of expected skills demand for those major skills that take a long time to learn and to teach (diploma, advanced diploma and above).

Annex 11: Details of costing

Annex 11.1: Detaisl fo costing under planned growth scenario (Scenario A)

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Provide access to market responsive TVET programs at local levels targeting inclusion (by also including full board scholarships to the students from local levels where it is not possible to open schools)	-	2,500,000	2,500,000	2,500,000	3,750,000	-	-	
Provide long term TVET program	-	26,446,800,600	34,026,895,800	46,530,236,160	47,277,509,760	48,273,874,560	52,657,879,680	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
Enhance gender balance in TVET learning opportunities	31,816,990	38,778,300	45,243,300	63,213,120	64,228,320	66,977,280	73,059,840	
	-	-	-	-	-	-	-	
	-	-	147,532,500	403,488,000	614,952,000	1,046,520,000	1,141,560,000	
	-	-	393,420,000	537,984,000	546,624,000	558,144,000	608,832,000	
Provide short term TVET programs for unemployed youth	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	5,727,182,500	6,274,482,500	6,881,192,500	8,117,655,000	9,066,720,000	10,144,062,500	11,368,045,000	
Provide training to existing worker using various TVET models	84,000,000	120,000,000	180,000,000	240,000,000	300,000,000	360,000,000	420,000,000	
Provide training to migrant workers using various TVET models	50,000,000	50,000,000	200,000,000	400,000,000	600,000,000	800,000,000	1,000,000,000	
Provide training to returnee migrant workers	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Increase full board scholarship quota for needy people and for ensuring access (from the local levels without TVET schools)	135,280,000	120,080,000	104,880,000	89,680,000	66,880,000	66,880,000	66,880,000	
Increase full board scholarship quota for needy people and for ensuring social inclusion	85,120,000	127,680,000	170,240,000	170,240,000	170,240,000	170,240,000	170,240,000	
Increase classified scholarship (Lakshit barga chattrabriti provides tuition fee free education) scheme	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
Conduct classified scholarship entrance exam in the same centre where general entrance exam is held	-	-	-	-	-	-	-	
Prepare sector education brief (Feasibility study, projection, structure)	-	-	25,000,000	25,000,000	47,500,000	-	-	
Expand number of school	-	-	-	-	-	-	-	
	3,000,000	3,000,000	3,000,000	3,000,000	47,000,000	51,000,000	88,000,000	
	1,150,000	700,000	700,000	700,000	700,000	700,000	5,200,000	
Establish Schools for Person with Disability (0.13%)	1,500,000	1,000,000	1,000,000	1,500,000	1,000,000	1,500,000	2,000,000	
Diversify horizontal and vertical expansion of TVET programs including on green technology/ energy and jobs	-	-	9,000,000	2,726,865,600	2,739,440,800	7,024,394,800	6,945,015,600	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Introduce Preparatory TVET in Grades 6 to 8	-	-	1,500,000	-	-	-	-	
Prepare sector education brief (Feasibility study, projection, structure) for L5 and above	-	15,000,000	32,500,000	-	-	-	-	
Increase sectors of economy to offer TVET programs - long and short term programs by also keeping focus on green technology/ energy and jobs	-	-	-	-	-	-	-	
Make all course curriculum modular, competency and credit based	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
Open higher level TVET qualification through NVQS based multi entry and exit education structure	-	-	-	-	-	-	-	
Establish separate hostel for girls, boys and disability for needy	58,039,680	58,039,680	498,619,400	942,253,840	1,388,943,000	76,368,000	76,368,000	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
Develop/refurbish the current infrastructure to ensure access of LWD to instructional learning environment (ILE)	-	7,004,800,000	10,507,200,000	14,009,600,000	17,512,000,000	-	-	
Introduce/scale up multi shift learning opportunity	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
	-	-	-	-	-	-	-	
Sub total-Objective No. 1	6,377,089,170	40,462,861,080	53,430,423,500	74,463,915,720	80,647,487,880	68,840,661,140	74,823,080,120	
Operationalise TVET accreditation body as a wing of National Quality Assurance Authority (NQAA) (conversion of current CTEVT)	800,000	-	-	-	-	-	-	
Accredit ate TVET schools	24,300,000	48,900,000	49,200,000	42,030,000	42,705,000	72,675,000	79,275,000	
Operationalise instructors accreditation/ licensing system	29,034,000	890,000	390,000	390,000	5,823,000	780,000	3,432,000	
Operationalize long term TVET sector plan for instructors preparation/development	500,000	500,000	500,000	500,000	500,000	500,000	500,000	
Hire instructors as per approved organogram	33,930,000	11,700,000	11,700,000	11,700,000	174,690,000	23,400,000	102,960,000	
Put instructors preparation plan in place	500,000	500,000	500,000	500,000	500,000	500,000	500,000	
	-	-	750,000	-	-	-	-	
Ensure instructional training to working instructors including ICT based learning management system (LMS)	95,418,300	281,079,200	348,976,500	9,490,000	141,693,000	18,980,000	83,512,000	
Increase occupational skills upgradation training (including various models such as apprenticeship and enterprise development of TVET)	223,720,000	292,030,000	478,050,000	13,000,000	194,100,000	26,000,000	114,400,000	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Provide training to management/ administrative staff	38,180,000	38,686,000	39,192,000	39,698,000	47,334,000	24,196,000	26,450,000	
Provide training to MoEST and province, district and local level personnel	-	2,300,000	2,300,000	1,150,000	-	-	-	
Provide higher degree educational opportunity for underqualified instructors only	-	74,400,000	74,400,000	74,400,000	74,400,000	148,800,000	74,400,000	
Reduce instructors' turnover	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
Introduce institute organogram with provision of permanent instructors	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	
Ensure schools have all instructors as per the approved organogram	-	-	-	-	-	-	-	
Establish school fund to engage instructor and student in production activities (Including earning from consultancy services by teachers and students after providing them with approved incentives/share)	500,000	-	-	-	-	-	-	
Reduce share of part time instructors	-	-	-	-	-	-	-	
Mobilized expert worker/ successful entrepreneurs from world of work to deliver lectures/ exchange session at school level	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Make work based learning /OJT mandatory in all TVET programs	-	-	-	-	-	-	-	
Establish effective collaboration between TVET system and BIAs.	500,000	-	-	-	-	500,000	-	
Establish effective collaboration between TVET system and BIAs.	73,993,000	86,174,000	98,355,000	134,496,000	136,656,000	139,536,000	152,208,000	
Operationalise NVQS implementation manuals for aligning learning resources with NVQF level descriptors (Covered by research, standard/curriculum development, teachers' training and development, management etc.)	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	700,000	
Ensure learning resources (standards/ curricula) NVQF level descriptors based	-	-	-	-	-	-	-	
Reform standards for implementation of NVQS	-	-	-	-	-	-	-	
Reform curricula for implementation of NVQS and also facilitating of multi-exit/ entry provision for facilitating 'self financed learning' and offering seamless academic and self/employment career path	-	-	-	-	-	-	-	
Ensure bridging inputs for entrance weak SEE graduates.	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Customise curricula to include specific enterprise development competence with individuals enterprise development projects	-	-	-	-	-	-	-	
Review weight of science and mathematics in curricula to ensure NVQF Level descriptor alignment	-	-	-	-	-	-	-	
Increase the share of schools/ institutes with more than 75% workable machine and equipment	-	-	9,660,000,000	10,180,000,000	-	-	-	
Increase the share of schools/ institutes with more than 75% workable machine and equipment	665,937,000	775,566,000	885,195,000	1,210,464,000	1,229,904,000	1,255,824,000	1,369,872,000	
Enhance ICT and e-learning system for distance/virtual learning (collaboration with expert teacher not available in any specific school/ province)	-	65,080,000	163,700,000	164,700,000	166,200,000	1,009,200,000	354,000,000	
Merge schools with less than the target ratio	-	-	-	-	-	-	-	
Maintain teacher-student ratio	-	-	-	-	-	-	-	
Increase cycle completion rate (for students who complete specific qualification of study continuously, semester 1 to 4)	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Increase survival rate (within additional 3 years time) (for students who complete specific qualification of study continuously, semester 1 to 4)	-	-	-	-	-	-	-	
Increase promotion rate to Grade 12 (diploma level)	-	-	-	-	-	-	-	
Operationalize technical backstopping (Monitoring) system for Provincial and Local level	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	
	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	
Implement module/chapters/tasks based competence assessment led formative assessment for measuring learning outcomes	7,399,300	8,617,400	9,835,500	13,449,600	13,665,600	13,953,600	15,220,800	
Establish practice of Instructors' evaluation by students	-	-	-	-	-	-	-	
Institutionalise practical based assessment (final examination) system	-	-	-	-	-	-	-	
	29,597,200	34,469,600	39,342,000	53,798,400	54,662,400	55,814,400	60,883,200	
Institutionalise Office of Controller of Examination (OCEs) capacity to swiftly facilitate examination and ensuring timely certification (not more than two months)	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Restructure CTEVT OCEs examination/ assessment system with purpose to make it provinces connected ICT based system conduction/facilitation and certification	4,000,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	
Reduce the duration between final examination and certification	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	
Digitalize outcomes of both formative/internal assessment and final assessment for making quick and swift (real time)	-	-	-	-	-	-	-	
Establish/upgrade accredited skill test centres	-	450,000	500,000	500,000	500,000	500,000	500,000	
Sub total-Objective No. 2	1,410,508,800	1,905,042,200	12,046,586,000	12,133,966,000	2,467,033,000	2,974,859,000	2,618,813,000	
Increase number of graduates in long term (pre-Diploma, Diploma and advance diploma) and short term programs	-	-	-	-	-	-	-	
Reform standards and curricula based on NVQF level descriptors	-	18,000,000	57,200,000	67,600,000	42,600,000	31,950,000	-	
	-	63,000,000	73,000,000	84,000,000	55,000,000	37,500,000	37,500,000	
	-	21,600,000	32,400,000	10,800,000	-	-	-	
Publish TVET sector annual report annually	900,000	900,000	900,000	900,000	900,000	900,000	900,000	
Continue publication of TVET journals	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	
Enhance employment rate of the graduates	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Institutionalise NVQF level descriptor based ILE resources (standards and curricula) preparation across the sector	-	-	-	-	-	-	-	
Ensure all TVET bodies have at least 50% members (outside Chair) are BIA representatives	-	-	-	-	-	-	-	
Ensure all heads of BIAs are by default members of relevance TVET bodies (CTEVT Assembly, council etc.)	-	-	-	-	-	-	-	
Ensure TVET schools have 50% members from BIAs	-	-	-	-	-	-	-	
Conduct study on system for incentivising business and industry to encourage productive partnership	-	-	-	-	-	-	-	
Establish SSCs through legislative instruments by defining their roles, responsibilities and incentives	-	-	-	-	-	-	-	
Form sector skill councils (SSCs)	-	11,500,000	23,000,000	34,500,000	46,000,000	46,000,000	46,000,000	
Sub total-Objective No. 3	3,900,000	118,000,000	189,500,000	200,800,000	147,500,000	119,350,000	87,400,000	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Revise/put NVQS implementation provision in current/new TVET Act and other relevant TVET legislative instruments	-	-	-	-	-	-	-	
Ensure recognition of all TVET Qualification as equivalent to General education Qualification	-	-	-	-	-	-	-	
Revise the current NVQF to include technical education to term it as 'National TVE Qualification Framework'	-	-	-	-	-	-	-	
Revise the current NVQF Levels from L1 to L8 to clarify level 5 as advance Diploma	-	-	-	-	-	-	-	
Introduce qualifications for Advance Diploma and Bachelors qualification level	-	-	-	-	-	-	-	
Establish High level Coordination Committee (HLCC) including membership from VC's of universities in the convenorship of NQAA (next form major role of CTEVT) for ensuring recognition of TVET qualifications and employment through TVET Act for NVQS implementation facilitation	300,000	300,000	300,000	300,000	300,000	300,000	300,000	
Establish Technical level Coordination Committee (TLCC) including	400,000	400,000	400,000	400,000	400,000	400,000	400,000	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
membership from Deans of universities in the convenorship of NQAA (next form major role of CTEVT) for ensuring recognition of TVET qualifications and employment through TVET Act for NVQS implementation facilitation								
Prepare NVQS implementation manuals	-	1,000,000	1,000,000	1,000,000	-	-	-	
Enhance the preparatory TVET at the Grades 6,7, and 8	-	-	-	-	-	-	-	
Manage bridging system to facilitate movement from TVET to General Education and Vice versa at relevant NVQ Levels	-	-	-	-	-	-	-	
Convert existing Technical Stream as Secondary qualification (from 12.5 yrs. to 12 yrs.' education)	-	-	-	-	-	-	-	
Reduce duration of 3 yrs. Diploma program into 2 yrs. Diploma program	-	-	-	-	-	-	-	
Convert existing Pre-diploma into Grade 9-10 qualification level (using modular and credit based)	-	-	-	-	-	-	-	
Ensure credit value of erstwhile pre-diploma	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Resolve recognition issue of TVET qualifications from Public Service Commission and universities	-	-	-	-	-	-	-	
Align existing Skills level 1 to 4 with NVQS	-	-	-	-	-	-	-	
Increase number of annual skills testing graduates	677,217,730	741,933,850	813,674,120	959,883,190	1,072,103,060	1,199,498,510	1,344,225,890	
Increase number of Recognition of Prior Learning (RPL) graduates	67,722,200	74,195,520	81,369,120	95,989,600	107,211,160	119,948,570	134,423,870	
Align NVQF with relevant international and South Asia Regional Qualification Frameworks (SARQF) to facilitate workforce mobility across the SA borders	-	-	-	-	-	-	-	
Sub total-Objective No. 4	745,639,930	817,829,370	896,743,240	1,057,572,790	1,180,014,220	1,320,147,080	1,479,349,760	
Prepare HRM Plan for federal level TVET system (CTEVT, CEHRD, CDC, NEB and others)	-	4,000,000	-	-	-	-	-	
Develop HR capacities of TVET personnel at federal levels (bureaucrats and academics, BIAs) following the HRM plan	-	-	-	-	-	-	-	
Provide incentive/allowance head-teacher, coordinator, account personnel of TVET institute	1,000,000	1,000,000	1,000,000	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Operationalize Federal/Provincial//Local level/school level TVET MIS (TMIS), financial MIS (FMIS) and Employment MIS (EmMIS)	-	-	-	-	-	-	-	
Establish Learner's support system (career guidance and counselling and employment facilitation) in each school in place	291,600,000	293,400,000	295,200,000	168,120,000	170,820,000	174,420,000	190,260,000	
Involve School executive committee(SEC) in decision making process.	-	-	-	-	-	-	-	
Establish student support unit (SSU)	-	-	-	-	-	-	-	
Prepare HRM plan for institute /school level	-	97,800,000	100,800,000	100,800,000	102,300,000	103,800,000	26,400,000	
Provide School Management training to Head Teacher/Principal	-	-	-	-	-	-	-	
Maintain IT based tracer study system at school level annually	48,600,000	48,900,000	49,200,000	28,020,000	28,470,000	29,070,000	31,710,000	
	500,000	500,000	500,000	500,000	500,000	500,000	500,000	
Provide sufficient budget to ensure quality ILE at school level	-	-	-	-	-	-	-	
Establish School Fund for enhancing school income with purpose to benefit students, instructors and school	162,000,000	164,500,000	166,000,000	96,000,000	99,500,000	103,000,000	132,000,000	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Establish production/ consultancy unit structure in schools with market linkage (through outlets)	-	-	-	-	-	-	-	
Introduce partnership scheme with BIAs for some financial incentives to the OJT learners	221,979,000	258,522,000	295,065,000	403,488,000	409,968,000	418,608,000	456,624,000	
Conduct Federal level exchange meetings/seminars on TVET regularly	500,000	500,000	500,000	500,000	500,000	500,000	500,000	
Conduct province and local level exchange meetings/seminars on TVET regularly	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	
	-	21,300,000	21,300,000	21,300,000	21,300,000	21,300,000	21,300,000	
	81,000,000	81,500,000	82,000,000	46,700,000	47,450,000	48,450,000	52,850,000	
Improve NSCO aligning with NVQF level descriptors and occupations in the existing/upcoming industries/economic sectors	-	-	-	-	-	-	-	
	-	8,000,000	-	-	-	-	-	
	961,909,000	1,120,262,000	1,278,615,000	1,748,448,000	1,776,528,000	1,813,968,000	1,978,704,000	
Establish system, in collaboration with BIAs, more specifically, with SSCs for forecasting workforce demand as per NVQF aligned NSCO	-	-	1,500,000	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Partner with CBS to incorporate NVQF based occupational-level data in National Labour Force Survey (NLFS)	-	-	-	-	-	-	-	
Institutionalize coordination among different levels of Governments on planning of specific research and during research design and sharing the findings	-	-	-	-	-	-	-	
Update/maintain the findings of all levels of studies in TVET knowledge management system (TMIS/EmMIS)	500,000	500,000	500,000	500,000	500,000	500,000	500,000	
Develop NSCO based needs assessment survey as pre-requisite for offering qualifications in other sectors	-	-	3,000,000	4,500,000	-	-	-	
Conduct impact studies at national level	-	-	4,000,000	-	-	4,000,000	-	
Continue publication of comprehensive TVET progress report	-	500,000	500,000	500,000	500,000	500,000	500,000	
Operationalize Communication strategy at federal, provincial and institute level	35,750,000	34,950,000	35,150,000	21,030,000	21,330,000	21,730,000	23,490,000	
Ensure toilets for both gender	-	-	-	-	-	-	-	
Manage first aid facilities	-	-	-	-	-	-	-	
Manage Canteen facilities	-	-	-	-	-	-	-	
Put student grievance handling unit	-	-	-	-	-	-	-	
Establish GESI Unit	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Ensure school with head teacher with school management training	-	-	-	-	-	-	-	
Allocate separate coordinate for program	-	-	-	-	-	-	-	
Give preference to female while making new hire to encourage gender equity	-	-	-	-	-	-	-	
Give preference to people with disability while making new hire to encourage social inclusion	-	-	-	-	-	-	-	
Ensure active SMC in each school	-	-	-	-	-	-	-	
Manage electricity in schools	-	-	-	-	-	-	-	
Organize skill competition at province level	-	-	-	-	-	-	-	
Organize Job fare at local level	-	-	-	-	-	-	-	
Manage library in schools	-	-	-	-	-	-	-	
Sub total-Objective No. 5	1,806,738,000	2,137,534,000	2,336,230,000	2,641,806,000	2,681,066,000	2,741,746,000	2,916,738,000	
Formulate TVET principles guided TVET Act and Rule (in context of federalisation)	-	-	-	-	-	-	-	
Convert CTEVT into National Quality Assurance Authority (NQAA) with main responsibility on regulatory/quality assurance (research, ILE resources development including chief master instructors preparation, instructors' accreditation, and assessments	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
(academic and physical) and certification) functions								
Align NVQF with South Asia Regional Qualification Frameworks (SARQF) and relevant international frameworks to facilitate workforce mobility across the SA borders	-	-	-	-	-	-	-	
Establish autonomous Provincial TVET Authorities (TVETAs) at province level under Provincial Ministry of Social Development/ Ministry of Education	-	-	-	-	-	-	-	
Assign regulatory responsibility/ quality assurance responsibility to CTEVT	-	-	-	-	-	-	-	
Assign responsibility of COEs/Model Schools to CTEVT	-	-	-	-	-	-	-	
Introduce stand-alone and TVET principles guided TVET Policy	-	-	-	-	-	-	-	
Facilitate preparation of stand-alone and TVET priciples guided Provincial TVET Policy	-	-	-	-	-	-	-	

Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88							
	80	81	82	83	84	85	86	
Ensure coordination mechanism in the spirit of Federal and Provincial TVET Acts	-	-	-	-	-	-	-	
SWAp Approach of financing	-	-	-	-	-	-	-	
Affordable fee structure (Constituent, Partnership, TECS and Private)	-	300,000	-	-	-	300,000	-	
Make TVET up to diploma level free of costs (Publicly funded programs)	-	-	-	-	-	-	-	
Access to finance (soft loan)	-	-	-	-	-	-	-	
Facilities soft loan to new entrepreneurs	-	-	-	-	-	-	-	
Integration in Government Accounting and reporting system	-	-	-	-	-	-	-	
Introduce cost sharing system at three level of government	-	-	-	-	-	-	-	
Establish technical backstopping mechanism through a Joint Team of Federal, provincial and local level TVET authorities	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	
Sub total-Objective No. 6	3,600,000	3,900,000	3,600,000	3,600,000	3,600,000	3,900,000	3,600,000	
Grand Total	10,347,475,980	45,445,166,731	68,903,082,822	90,501,660,593	87,126,701,184	76,000,663,305	81,928,980,966	

Annex 11b: **Details of costing under business-as-usual growth scenario (Scenario B)**

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
10000	10100	10101	Provide access to market responsive TVET programs at local levels targeting inclusion (by also including full board scholarships to the students from local levels where it is not possible to open schools)	7,250,000	2,500,000	2,500,000	2,500,000	3,750,000	-	-	-	-	-	18,500,000
10000	10100	10102-1	Provide long term TVET program	22,474,593,900	23,508,233,100	27,719,353,080	28,994,561,640	30,328,237,440	31,723,148,160	33,182,407,440	34,708,782,960	36,305,388,360	37,975,683,240	306,920,389,320
10000	10100	10102-2		-	-	-	-	-	-	-	-	-	-	-
10000	10100	10102-3		-	-	-	-	-	-	-	-	-	-	-
10000	10100	10103-1	Enhance gender balance in TVET learning opportunities	31,489,330	34,469,550	36,856,580	39,390,230	41,202,080	44,014,080	46,038,720	49,159,740	51,421,090	54,884,500	428,925,900
10000	10100	10103-2		-	-	-	-	-	-	-	-	-	-	-
10000	10100	10103-3		-	-	120,184,500	251,427,000	394,488,000	687,720,000	719,355,000	752,445,000	787,057,500	823,267,500	4,535,944,500
10000	10100	10103-4		-	-	320,492,000	335,236,000	350,656,000	366,784,000	383,656,000	401,304,000	419,764,000	439,076,000	3,016,968,000
10000	10100	10104-1	Provide short term TVET programs for unemployed youth	-	-	-	-	-	-	-	-	-	-	-
10000	10100	10104-2		-	-	-	-	-	-	-	-	-	-	-
10000	10100	10104-3		-	-	-	-	-	-	-	-	-	-	-
10000	10100	10104-4		5,720,000,000	5,980,000,000	6,272,500,000	6,565,000,000	6,857,500,000	7,182,500,000	7,507,500,000	7,832,500,000	8,222,500,000	8,580,000,000	70,720,000,000
10000	10200	10201	Provide training to existing worker using various TVET models	84,000,000	120,000,000	180,000,000	240,000,000	300,000,000	360,000,000	420,000,000	480,000,000	600,000,000	720,000,000	3,504,000,000
10000	10200	10202	Provide training to migrant workers using various TVET models	50,000,000	50,000,000	200,000,000	400,000,000	600,000,000	800,000,000	1,000,000,000	1,200,000,000	1,600,000,000	2,000,000,000	7,900,000,000
10000	10200	10203	Provide training to returnee migrant workers	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	2,000,000,000
10000	10300	10301	Increase full board scholarship quota for needy people and for ensuring access (from the local levels without TVET schools)	135,280,000	120,080,000	104,880,000	89,680,000	66,880,000	66,880,000	66,880,000	66,880,000	66,880,000	66,880,000	851,200,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
10000	10300	10302	Increase full board scholarship quota for needy people and for ensuring social inclusion	85,120,000	127,680,000	170,240,000	170,240,000	170,240,000	170,240,000	170,240,000	170,240,000	170,240,000	170,240,000	1,574,720,000
10000	10300	10303-1	Increase classified scholarship (Lakshit barga chattrabriti provides tuition fee free education) scheme	-	-	-	-	-	-	-	-	-	-	-
10000	10300	10303-2		-	-	-	-	-	-	-	-	-	-	-
10000	10300	10304	Conduct classified scholarship entrance exam in the same centre where general entrance exam is held	-	-	-	-	-	-	-	-	-	-	-
10000	10400	10401	Prepare sector education brief (Feasibility study, projection, structure)	-	-	25,000,000	25,000,000	47,500,000	-	-	-	-	-	97,500,000
10000	10400	10402-1	Expand number of school	-	-	-	-	-	-	-	-	-	-	-
10000	10400	10402-2		3,000,000	3,000,000	3,000,000	3,000,000	47,000,000	51,000,000	88,000,000	51,000,000	21,000,000	21,000,000	291,000,000
10000	10400	10402-3		1,150,000	700,000	700,000	700,000	700,000	700,000	5,200,000	3,950,000	11,250,000	11,800,000	36,850,000
10000	10400	10403	Establish Schools for Person with Disability (0.13%)	1,500,000	1,000,000	1,000,000	1,500,000	1,000,000	1,500,000	2,000,000	2,000,000	2,500,000	2,500,000	16,500,000
10000	10500	10501	Diversify horizontal and vertical expansion of TVET programs including on green technology/ energy and jobs	-	-	9,000,000	216,249,600	215,684,800	697,344,640	718,775,520	751,818,240	786,648,000	822,844,320	4,218,365,120
10000	10500	10502	Introduce Preparatory TVET in Grades 6 to 8	-	-	1,500,000	-	-	-	-	-	-	-	1,500,000
10000	10500	10503	Prepare sector education brief (Feasibility study, projection, structure) for L5 and above	-	15,000,000	47,500,000	-	-	-	-	-	-	-	62,500,000
10000	10500	10504	Increase sectors of economy to offer TVET programs - long and short term programs by also keeping focus on green technology/ energy and jobs	-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
10000	10600	10601-1	Make all course curriculum modular, competency and credit based	-	-	-	-	-	-	-	-	-	-	-
10000	10600	10601-2		-	-	-	-	-	-	-	-	-	-	-
10000	10600	10602	Open higher level TVET qualification through NVQS based multi entry and exit education structure	-	-	-	-	-	-	-	-	-	-	-
10000	10700	10701-1	Establish separate hostel for girls, boys and disability for needy	58,039,680	58,039,680	498,619,400	942,253,840	1,388,943,000	76,368,000	76,368,000	76,368,000	76,368,000	76,368,000	3,327,735,600
10000	10700	10701-2		-	-	-	-	-	-	-	-	-	-	-
10000	10700	10701-3		-	-	-	-	-	-	-	-	-	-	-
10000	10700	10702	Develop/refurbish the current infrastructure to ensure access of LWD to instructional learning environment (ILE)	-	7,004,800,000	10,507,200,000	14,009,600,000	17,512,000,000	-	-	-	-	-	49,033,600,000
10000	10800	10801-1	Introduce/scale up multi shift learning opportunity	-	-	-	-	-	-	-	-	-	-	-
10000	10800	10801-2		-	-	-	-	-	-	-	-	-	-	-
			Sub total-Objective No. 1	28,851,422,910	37,225,502,330	46,420,525,560	52,486,338,310	58,525,781,320	42,428,198,880	44,586,420,680	46,746,447,940	49,321,016,950	51,964,543,560	458,556,198,440
20000	20100	20101	Operationalise TVET accreditation body as a wing of National Quality Assurance Authority (NQAA) (conversion of current CTEVT)	800,000	-	-	-	-	-	-	-	-	-	800,000
20000	20100	20102	Accredit ate TVET schools	24,300,000	48,900,000	49,200,000	42,030,000	42,705,000	72,675,000	79,275,000	138,840,000	153,960,000	212,400,000	864,285,000
20000	20100	20103	Operationalise instructors accreditation/ licensing system	29,034,000	890,000	390,000	390,000	5,823,000	780,000	3,432,000	3,900,000	4,914,000	5,187,000	54,740,000
20000	20200	20201	Operationalize long term TVET sector plan for instructors preparation/ development	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,000,000
20000	20200	20202	Hire instructors as per approved organogram	33,930,000	11,700,000	11,700,000	11,700,000	174,690,000	23,400,000	102,960,000	117,000,000	147,420,000	155,610,000	790,110,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
20000	20300	20301-1	Put instructors preparation plan in place	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,000,000
20000	20300	20301-2		-	-	750,000	-	-	-	-	-	-	-	750,000
20000	20300	20302	Ensure instructional training to working instructors including ICT based learning management system (LMS)	95,418,300	362,737,000	725,474,000	9,490,000	141,693,000	18,980,000	83,512,000	94,900,000	119,574,000	126,217,000	1,777,995,300
20000	20300	20303	Increase occupational skills upgradation training to instructors (including various models such as apprenticeship and enterprise development of TVET)	223,720,000	292,030,000	478,050,000	13,000,000	194,100,000	26,000,000	114,400,000	130,000,000	163,800,000	172,900,000	1,808,000,000
20000	20300	20304	Provide training to management/ administrative staff	38,180,000	38,686,000	39,192,000	39,698,000	47,334,000	24,196,000	26,450,000	29,026,000	32,246,000	35,650,000	350,658,000
20000	20300	20305	Provide training to MoEST and province, district and local level personnel	-	2,300,000	2,300,000	1,150,000	-	-	-	-	-	-	5,750,000
20000	20300	20306	Provide higher degree educational opportunity for underqualified instructors only	-	74,400,000	74,400,000	74,400,000	74,400,000	148,800,000	74,400,000	74,400,000	74,400,000	74,400,000	744,000,000
20000	20400	20401-1	Reduce instructors' turnover	-	-	-	-	-	-	-	-	-	-	-
20000	20400	20401-2		-	-	-	-	-	-	-	-	-	-	-
20000	20400	20401-3		-	-	-	-	-	-	-	-	-	-	-
20000	20400	20402-1	Introduce institute organogram with provision of permanent instructors	-	-	-	-	-	-	-	-	-	-	-
20000	20400	20402-2		-	-	-	-	-	-	-	-	-	-	-
20000	20400	20403	Ensure schools have all instructors as per the approved organogram	-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
20000	20400	20404	Establish school fund to engage instructor and student in production activities (Including earning from consultancy services by teachers and students after providing them with approved incentives/share)	500,000	-	-	-	-	-	-	-	-	-	500,000
20000	20400	20405	Reduce share of part time instructors	-	-	-	-	-	-	-	-	-	-	-
20000	20400	20406	Mobilized expert worker/ successful entrepreneurs from world of work to deliver lectures/ exchange session at school level	-	-	-	-	-	-	-	-	-	-	-
20000	20500	20501-1	Make work based learning /OJT mandatory in all TVET programs	-	-	-	-	-	-	-	-	-	-	-
20000	20500	20501-2		-	-	-	-	-	-	-	-	-	-	-
20000	20500	20501-3		-	-	-	-	-	-	-	-	-	-	-
20000	20500	20502.1	Establish effective collaboration between TVET system and BIAs.	500,000	-	-	-	-	500,000	-	-	-	-	1,000,000
20000	20500	20502.2	Establish effective collaboration between TVET system and BIAs.	73,993,000	86,174,000	98,355,000	134,496,000	136,656,000	139,536,000	152,208,000	166,608,000	184,752,000	203,904,000	1,376,682,000
20000	20600	20601-1	Operationalize NVQS implementation manuals for aligning learning resources with NVQF level descriptors (Covered by research, standard/curriculum development, teachers' training and development, management etc.)	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	700,000	700,000	700,000	700,000	25,000,000
20000	20600	20601-2		-	-	-	-	-	-	-	-	-	-	-
20000	20600	20602-1	Ensure learning resources (standards/ curricula) NVQF level descriptors based	-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
20000	20600	20602-2		-	-	-	-	-	-	-	-	-	-	-
20000	20600	20603	Reform standards for implementation of NVQS	-	-	-	-	-	-	-	-	-	-	-
20000	20600	20604	Reform curricula for implementation of NVQS and also facilitating of multi-exit/ entry provision for facilitating 'self-financed learning' and offering seamless academic and self/employment career path	-	-	-	-	-	-	-	-	-	-	-
20000	20600	20605	Ensure bridging inputs for entrance weak SEE graduates.	-	-	-	-	-	-	-	-	-	-	-
20000	20600	20606	Customise curricula to include specific enterprise development competence with individuals enterprise development projects	-	-	-	-	-	-	-	-	-	-	-
20000	20600	20607	Review weight of science and mathematics in curricula to ensure NVQF Level descriptor alignment	-	-	-	-	-	-	-	-	-	-	-
20000	20700	20701-1.1	Increase the share of schools/ institutes with more than 75% workable machine and equipment	-	-	9,660,000,000	10,180,000,000	-	-	-	-	-	-	19,840,000,000
20000	20700	20701-1.2	Increase the share of schools/ institutes with more than 75% workable machine and equipment	659,079,000	689,391,000	721,107,000	754,281,000	788,976,000	825,264,000	863,226,000	902,934,000	944,469,000	987,921,000	8,136,648,000
20000	20700	20701-2		-	-	-	-	-	-	-	-	-	-	-
20000	20800	20801	Enhance ICT and e-learning system for distance/virtual learning (collaboration with expert teacher not available in any specific school/ province)	-	65,080,000	163,700,000	164,700,000	166,200,000	1,009,200,000	354,000,000	374,000,000	399,200,000	425,800,000	3,121,880,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
20000	20900	20901	Merge schools with less than the target ratio	-	-	-	-	-	-	-	-	-	-	-
20000	20900	20902	Maintain teacher-student ratio	-	-	-	-	-	-	-	-	-	-	-
20000	20900	20903	Increase cycle completion rate (for students who complete specific qualification of study continuously, semester 1 to 4)	-	-	-	-	-	-	-	-	-	-	-
20000	20900	20904	Increase survival rate (within additional 3 years time) (for students who complete specific qualification of study continuously, semester 1 to 4)	-	-	-	-	-	-	-	-	-	-	-
20000	20900	20905	Increase promotion rate to Grade 12 (diploma level)	-	-	-	-	-	-	-	-	-	-	-
20000	21000	21001-1	Operationalize technical backstopping (Monitoring) system for Provincial and Local level	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	35,000,000
20000	21000	21001-2		7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	70,000,000
20000	21100	21101	Implement module/chapters/tasks based competence assessment led formative assessment for measuring learning outcomes	7,323,100	7,659,900	8,012,300	8,380,900	8,766,400	9,169,600	9,591,400	10,032,600	10,494,100	10,976,900	90,407,200
20000	21100	21102	Establish practice of Instructors' evaluation by students	-	-	-	-	-	-	-	-	-	-	-
20000	21100	21103-1	Institutionalise practical based assessment (final examination) system	-	-	-	-	-	-	-	-	-	-	-
20000	21100	21103-2		29,292,400	30,639,600	32,049,200	33,523,600	35,065,600	36,678,400	38,365,600	40,130,400	41,976,400	43,907,600	361,628,800
20000	21200	21201-1	Institutionalize Office of Controller of Examination (OCEs) capacity to swiftly facilitate examination and ensuring timely	-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
			certification (not more than two months)											
20000	21200	21201-2		-	-	-	-	-	-	-	-	-	-	-
20000	21200	21202	Restructure CTEVT OCEs examination/ assessment system with purpose to make it provinces connected ICT based system conduction/facilitation and certification	4,000,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	17,500,000
20000	21200	21203	Reduce the duration between final examination and certification	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	168,000,000	1,680,000,000
20000	21200	21204	Digitalize outcomes of both formative/internal assessment and final assessment for making quick and swift (real time)	-	-	-	-	-	-	-	-	-	-	-
20000	21300	21301	Establish/upgrade accredited skill test centres	-	450,000	500,000	500,000	500,000	500,000	500,000	-	-	-	2,950,000
			Sub total-Objective No. 2	1,403,269,800	1,895,737,500	12,249,879,500	11,652,439,500	2,001,609,000	2,520,379,000	2,084,020,000	2,263,471,000	2,458,905,500	2,636,573,500	41,166,284,300
30000	30100	30101-1	Increase number of graduates in long term (pre-Diploma, Diploma and advance diploma) and short term programs	-	-	-	-	-	-	-	-	-	-	-
30000	30100	30101-2		-	-	-	-	-	-	-	-	-	-	-
30000	30200	30201-1	Reform standards and curricula based on NVQF level descriptors	-	18,000,000	57,200,000	67,600,000	42,600,000	31,950,000	-	-	-	-	217,350,000
30000	30200	30201-2		-	-	-	-	-	-	-	-	-	-	-
30000	30200	30201-3		-	-	-	-	-	-	-	-	-	-	-
30000	30200	30201-4		-	63,000,000	136,000,000	220,000,000	240,000,000	202,500,000	240,000,000	-	-	-	1,101,500,000
30000	30200	30201-5		-	-	-	-	-	-	-	-	-	-	-
30000	30200	30201-6		-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
30000	30200	30201-7		-	21,600,000	54,000,000	21,600,000	-	-	-	-	-	-	97,200,000
30000	30300	30301	Publish TVET sector annual report annually	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	9,000,000
30000	30300	30302	Continue publication of TVET journals	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	30,000,000
30000	30400	30401	Enhance employment rate of the graduates	-	-	-	-	-	-	-	-	-	-	-
30000	30400	30402	Institutionalise NVQF level descriptor based ILE resources (standards and curricula) preparation across the sector	-	-	-	-	-	-	-	-	-	-	-
30000	30500	30501-1	Ensure all TVET bodies have at least 50% members (outside Chair) are BIA representatives	-	-	-	-	-	-	-	-	-	-	-
30000	30500	30501-2		-	-	-	-	-	-	-	-	-	-	-
30000	30500	30501-3		-	-	-	-	-	-	-	-	-	-	-
30000	30500	30501-4		-	-	-	-	-	-	-	-	-	-	-
30000	30500	30502	Ensure all heads of BIAs are by default members of relevance TVET bodies (CTEVT Assembly, council etc.)	-	-	-	-	-	-	-	-	-	-	-
30000	30500	30503-1	Ensure TVET schools have 50% members from BIAs	-	-	-	-	-	-	-	-	-	-	-
30000	30500	30503-2		-	-	-	-	-	-	-	-	-	-	-
30000	30500	30504	Conduct study on system for incentivising business and industry to encourage productive partnership	-	-	-	-	-	-	-	-	-	-	-
30000	30600	30601	Establish SSCs through legislative instruments by defining their roles, responsibilities and incentives	-	-	-	-	-	-	-	-	-	-	-
30000	30600	30602	Form sector skill councils (SSCs)	-	11,500,000	23,000,000	34,500,000	46,000,000	46,000,000	46,000,000	46,000,000	46,000,000	46,000,000	345,000,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
			Sub total-Objective No. 3	3,900,000	118,000,000	274,100,000	347,600,000	332,500,000	284,350,000	289,900,000	49,900,000	49,900,000	49,900,000	1,800,050,000
40000	40100	40101	Revise/put NVQS implementation provision in current/new TVET Act and other relevant TVET legislative instruments	-	-	-	-	-	-	-	-	-	-	-
40000	40100	40102	Ensure recognition of all TVET Qualification as equivalent to General education Qualification	-	-	-	-	-	-	-	-	-	-	-
40000	40100	40103	Revise the current NVQF to include technical education to term it as 'National TVE Qualification Framework'	-	-	-	-	-	-	-	-	-	-	-
40000	40100	40104	Revise the current NVQF Levels from L1 to L8 to clarify level 5 as advance Diploma	-	-	-	-	-	-	-	-	-	-	-
40000	40100	40105-1	Introduce qualifications for Advance Diploma and Bachelors qualification level	-	-	-	-	-	-	-	-	-	-	-
40000	40100	40105-2		-	-	-	-	-	-	-	-	-	-	-
40000	40100	40106	Establish NVQS Steering Committee (NSC) (Annex 15) including membership from VC's of universities in the convenorship of NQAA (next form major role of CTEVT) for ensuring recognition of TVET qualifications and employment through TVET Act for NVQS implementation facilitation	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	3,000,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
40000	40100	40107	Establish NVQS Management Committee (NMC) (Annex 16) including membership from Deans of universities in the convenorship of NQAA (next form major role of CTEVT) for ensuring recognition of TVET qualifications and employment through TVET Act for NVQS implementation facilitation	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	4,000,000
40000	40100	40108	Prepare NVQS implementation manuals	-	1,000,000	1,000,000	1,000,000	-	-	-	-	-	-	3,000,000
40000	40200	40201	Enhance the preparatory TVET at the Grades 6,7, and 8	-	-	-	-	-	-	-	-	-	-	-
40000	40200	40202	Manage bridging system to facilitate movement from TVET to General Education and Vice versa at relevant NVQ Levels	-	-	-	-	-	-	-	-	-	-	-
40000	40300	40301	Convert existing Technical Stream as Secondary qualification (from 12.5 yrs. to 12 yrs.' education)	-	-	-	-	-	-	-	-	-	-	-
40000	40300	40302	Reduce duration of 3 yrs. Diploma program into 2 yrs. Diploma program	-	-	-	-	-	-	-	-	-	-	-
40000	40300	40303	Convert existing Pre-diploma into Grade 9-10 qualification level (using modular and credit based)	-	-	-	-	-	-	-	-	-	-	-
40000	40300	40304	Ensure credit value of erstwhile pre-diploma	-	-	-	-	-	-	-	-	-	-	-
40000	40300	40305-1	Resolve recognition issue of TVET qualifications from Public Service Commission and Universities	-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
40000	40300	40305-2		-	-	-	-	-	-	-	-	-	-	-
40000	40300	40306	Align existing Skills level 1 to 4 with NVQS	-	-	-	-	-	-	-	-	-	-	-
40000	40400	40401	Increase number of annual skills testing graduates	375,760,000	392,840,000	412,055,000	431,270,000	450,485,000	471,835,000	493,185,000	514,535,000	540,155,000	563,640,000	4,645,760,000
40000	40400	40402	Increase number of Recognition of Prior Learning (RPL) graduates	67,722,200	74,191,250	81,369,120	95,989,600	107,211,160	119,948,570	134,423,870	150,880,450	171,675,350	193,401,110	1,196,812,680
40000	40400	40403	Align NVQF with relevant international and South Asia Regional Qualification Frameworks (SARQF) to facilitate workforce mobility across the SA borders	-	-	-	-	-	-	-	-	-	-	-
			Sub total-Objective No. 4	444,182,200	468,731,250	495,124,120	528,959,600	558,396,160	592,483,570	628,308,870	666,115,450	712,530,350	757,741,110	5,852,572,680
50000	50100	50101	Prepare HRM Plan for federal level TVET system (CTEVT, CEHRD, CDC, NEB and others)	-	4,000,000	-	-	-	-	-	-	-	-	4,000,000
50000	50100	50102	Develop HR capacities of TVET personnel at federal levels (bureaucrats and academics, BIAs) following the HRM plan	-	-	-	-	-	-	-	-	-	-	-
50000	50100	50103	Provide incentive/allowance head-teacher, coordinator, account personnel of TVET institute	1,000,000	1,000,000	1,000,000	-	-	-	-	-	-	-	3,000,000
50000	50100	50104	Operationalize Federal/Provincial/ /Local level/school level TVET MIS (TMIS), financial MIS (FMIS) and Employment MIS (EmMIS)	-	-	-	-	-	-	-	-	-	-	-
50000	50200	50201	Establish Learner's support system (career guidance and counselling and employment facilitation) in each school in place	291,600,000	293,400,000	295,200,000	168,120,000	170,820,000	174,420,000	190,260,000	208,260,000	230,940,000	254,880,000	2,277,900,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
50000	50200	50202	Involve School executive committee (SEC) in decision making process.	-	-	-	-	-	-	-	-	-	-	-
50000	50200	50203	Establish student support unit (SSU)	-	-	-	-	-	-	-	-	-	-	-
50000	50300	50301	Prepare HRM plan for institute /school level	-	900,000	3,900,000	3,900,000	5,400,000	6,900,000	26,400,000	30,000,000	37,800,000	39,900,000	155,100,000
50000	50300	50302-1	Provide School Management training to Head Teacher/Principal	-	-	-	-	-	-	-	-	-	-	-
50000	50300	50302-2		-	-	-	-	-	-	-	-	-	-	-
50000	50300	50303-1	Maintain IT based tracer study system at school level annually	48,600,000	48,900,000	49,200,000	28,020,000	28,470,000	29,070,000	31,710,000	34,710,000	38,490,000	42,480,000	379,650,000
50000	50300	50303-2		500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,000,000
50000	50400	50401	Provide sufficient budget to ensure quality ILE at school level	-	-	-	-	-	-	-	-	-	-	-
50000	50500	50501	Establish School Fund for enhancing school income with purpose to benefit students, instructors and school	162,000,000	164,500,000	166,000,000	96,000,000	99,500,000	103,000,000	132,000,000	145,500,000	166,500,000	142,000,000	1,377,000,000
50000	50500	50502	Establish production/ consultancy unit structure in schools with market linkage (through outlets)	-	-	-	-	-	-	-	-	-	-	-
50000	50600	50601	Introduce partnership scheme with BIAs for some financial incentives to the OJT learners	219,693,000	229,797,000	240,369,000	251,427,000	262,992,000	275,088,000	287,742,000	300,978,000	314,823,000	329,307,000	2,712,216,000
50000	50700	50701	Conduct Federal level exchange meetings/seminars on TVET regularly	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,000,000
50000	50700	50702-1	Conduct province and local level exchange meetings/seminars on TVET regularly	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	14,000,000
50000	50700	50702-2		-	21,300,000	21,300,000	21,300,000	21,300,000	21,300,000	21,300,000	21,300,000	21,300,000	21,300,000	191,700,000
50000	50700	50702-3		81,000,000	81,500,000	82,000,000	46,700,000	47,450,000	48,450,000	52,850,000	57,850,000	64,150,000	70,800,000	632,750,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
50000	50800	50801-1	Improve NSCO aligning with NVQF level descriptors and occupations in the existing/upcoming industries/economic sectors	-	-	-	-	-	-	-	-	-	-	-
50000	50800	50801-2.1		-	8,000,000	-	-	-	-	-	-	-	-	8,000,000
50000	50800	50801-2.2		961,909,000	1,120,262,000	1,278,615,000	1,748,448,000	1,776,528,000	1,813,968,000	1,978,704,000	2,165,904,000	2,401,776,000	2,650,752,000	17,896,866,000
50000	50800	50802-1	Establish system, in collaboration with BIAs, more specifically, with SSCs for forecasting workforce demand as per NVQF aligned NSCO	-	-	1,500,000	-	-	-	-	1,500,000	-	-	3,000,000
50000	50800	50802-2		-	-	-	-	-	-	-	-	-	-	-
50000	50800	50803	Partner with CBS to incorporate NVQF based occupational-level data in National Labour Force Survey (NLFS)	-	-	-	-	-	-	-	-	-	-	-
50000	50800	50804	Institutionalize coordination among different levels of Governments on planning of specific research and during research design and sharing the findings	-	-	-	-	-	-	-	-	-	-	-
50000	50800	50805	Update/maintain the findings of all levels of studies in TVET knowledge management system (TMIS/EmMIS)	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,000,000
50000	50800	50806	Develop NSCO based needs assessment survey as pre-requisite for offering qualifications in other sectors	-	-	3,000,000	7,500,000	-	-	-	-	-	-	10,500,000
50000	50800	50807	Conduct impact studies at national level	-	-	4,000,000	-	-	4,000,000	-	-	4,000,000	-	12,000,000
50000	50800	50808	Continue publication of comprehensive	-	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	4,500,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
			TVET progress report											
50000	50900	50901	Operationalize Communication strategy at federal, provincial and institute level	35,750,000	34,950,000	35,150,000	21,030,000	21,330,000	21,730,000	23,490,000	25,490,000	28,010,000	30,670,000	277,600,000
50000	51000	51001-1	Ensure toilets for both gender	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51001-2		-	-	-	-	-	-	-	-	-	-	-
50000	51000	51001-3		-	-	-	-	-	-	-	-	-	-	-
50000	51000	51002	Manage first aid facilities	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51003	Manage Canteen facilities	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51004	Put student grievance handling unit	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51005	Establish GESI Unit	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51006	Ensure school with head teacher with school management training	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51007	Allocate separate coordinate for program	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51008	Give preference to female while making new hire to encourage gender equity	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51009	Give preference to people with disability while making new hire to encourage social inclusion	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51010	Ensure active SMC in each school	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51011	Manage electricity in schools	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51012	Organize skill competition at province level	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51013	Organize Job fare at local level	-	-	-	-	-	-	-	-	-	-	-
50000	51000	51014	Manage library in schools	-	-	-	-	-	-	-	-	-	-	-
			Sub total-Objective No. 5	1,804,452,000	2,011,909,000	2,184,634,000	2,395,845,000	2,437,190,000	2,501,326,000	2,747,856,000	2,994,892,000	3,311,189,000	3,585,489,000	25,974,782,000
60000	60100	60101-1	Formulate TVET principles guided TVET Act and Rule (in context of federalization)	-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
60000	60100	60101-2		-	-	-	-	-	-	-	-	-	-	-
60000	60100	60101-3		-	-	-	-	-	-	-	-	-	-	-
60000	60100	60101-3		-	-	-	-	-	-	-	-	-	-	-
60000	60100	60102-1	Convert CTEVT into National Quality Assurance Authority (NQAA) with main responsibility on regulatory/quality assurance (research, ILE resources development including chief master instructors' preparation, instructors' accreditation, and assessments (academic and physical) and certification) functions	-	-	-	-	-	-	-	-	-	-	-
60000	60100	60102-2		-	-	-	-	-	-	-	-	-	-	-
60000	60100	60102-3		-	-	-	-	-	-	-	-	-	-	-
60000	60100	60102-4		-	-	-	-	-	-	-	-	-	-	-
60000	60100	60103	Align NVQF with South Asia Regional Qualification Frameworks (SARQF) and relevant international frameworks to facilitate workforce mobility across the SA borders	-	-	-	-	-	-	-	-	-	-	-
60000	60100	60104	Establish autonomous Provincial TVET Authorities (TVETAs) at province level under Provincial Ministry of Social Development/ Ministry of Education	-	-	-	-	-	-	-	-	-	-	-
60000	60200	60201	Assign regulatory responsibility/ quality assurance responsibility to CTEVT	-	-	-	-	-	-	-	-	-	-	-

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
60000	60200	60202-1	Assign responsibility of COEs/Model Schools to CTEVT	-	-	-	-	-	-	-	-	-	-	-
60000	60200	60202-2		-	-	-	-	-	-	-	-	-	-	-
60000	60200	60202-3		-	-	-	-	-	-	-	-	-	-	-
60000	60300	60301	Introduce stand-alone and TVET principles guided TVET Policy	-	-	-	-	-	-	-	-	-	-	-
60000	60300	60302	Facilitate preparation of stand-alone and TVET priciples guided Provincial TVET Policy	-	-	-	-	-	-	-	-	-	-	-
60000	60400	60401-1	Ensure coordination mechanism in the spirit of Federal and Provincial TVET Acts	-	-	-	-	-	-	-	-	-	-	-
60000	60400	60401-2		-	-	-	-	-	-	-	-	-	-	-
60000	60400	60401-3		-	-	-	-	-	-	-	-	-	-	-
60000	60500	60501	SWAp Approach of financing	-	-	-	-	-	-	-	-	-	-	-
60000	60500	60502	Affordable fee structure (Constituent, Partnership, TECS and Private)	-	300,000	-	-	-	300,000	-	-	-	300,000	900,000
60000	60500	60503	Make TVET up to diploma level free of costs (Publicly funded programs)	-	-	-	-	-	-	-	-	-	-	-
60000	60500	60504	Access to finance (soft loan)	-	-	-	-	-	-	-	-	-	-	-
60000	60500	60505	Facilities soft loan to new entrepreneurs	-	-	-	-	-	-	-	-	-	-	-
60000	60500	60506	Integration in Government Accounting and reporting system	-	-	-	-	-	-	-	-	-	-	-
60000	60500	60507	Introduce cost sharing system at three level of government	-	-	-	-	-	-	-	-	-	-	-
60000	60600	60601	Establish technical backstopping mechanism through a Joint Team of Federal, provincial and local level TVET authorities	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	3,600,000	36,000,000
			Sub total-Objective No. 6	3,600,000	3,900,000	3,600,000	3,600,000	3,600,000	3,900,000	3,600,000	3,600,000	3,600,000	3,900,000	36,900,000

Obj.	Strategy	CODE	Objectives, strategies and interventions	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										Total
				80	81	82	83	84	85	86	87	88	89	
			Grand Total	32,510,826,990	41,723,780,161	61,627,863,262	67,414,782,493	63,859,076,564	48,330,637,535	50,340,105,636	52,724,426,477	55,857,141,888	58,998,147,259	533,386,787,420

Annex 11c: Financing distribution across public and private stakeholders (Scenario B) in NRS.

Sector	cost center	Timeline (short run: 80-81; medium: up to 82-84; long: up to 88										
		80	81	82	83	84	85	86	87	88	89	Total
Public	Federal Level	2,231,547,647	2,534,401,750	12,650,128,685	13,363,671,806	3,344,994,726	3,947,548,777	4,061,664,405	4,011,706,661	4,191,594,079	4,431,348,487	54,768,607,022
	Provincial Level	4,643,212,980	7,303,560,570	9,593,443,971	10,081,599,133	11,922,709,086	6,428,123,457	6,919,157,301	7,338,369,199	7,963,215,067	8,531,185,967	80,724,576,730
	Local Level	10,362,650,073	15,810,390,705	20,264,000,906	23,787,683,280	27,334,290,701	15,174,288,250	15,826,138,376	16,674,934,753	17,735,022,576	18,785,890,920	181,755,290,539
	Subtotal-Public	17,237,410,700	25,648,353,024	42,507,573,562	47,232,954,219	42,601,994,513	25,549,960,484	26,806,960,082	28,025,010,613	29,889,831,721	31,748,425,374	317,248,474,291
Private	Training providers	1,076,529,220	1,182,947,990	1,290,323,240	1,428,995,150	1,458,607,600	1,495,046,560	1,646,796,260	1,795,353,220	1,985,232,190	2,153,372,590	15,513,204,020
	Parents Contribution	14,196,886,990	14,880,979,067	17,806,966,378	18,718,333,041	19,752,474,367	21,239,630,406	21,840,349,208	22,858,062,557	23,936,077,890	25,050,349,206	200,280,109,109
	Business & Industry	-	11,500,000	23,000,000	34,500,000	46,000,000	46,000,000	46,000,000	46,000,000	46,000,000	46,000,000	345,000,000
	Subtotal-Private	15,273,416,210	16,075,427,057	19,120,289,618	20,181,828,191	21,257,081,967	22,780,676,966	23,533,145,468	24,699,415,777	25,967,310,080	27,249,721,796	216,138,313,129
	Grand Total	32,510,826,910	41,723,780,080	61,627,863,180	67,414,782,410	63,859,076,480	48,330,637,450	50,340,105,550	52,724,426,390	55,857,141,800	58,998,147,170	533,386,787,420

Annex 11d: Cost summary (Scenario B) in NRs. arab

Sector	Cost Center	Total	Short run (80-81)	Medium run (82-85)	Long run (86-89)	Proportion of total	Annual Average
Public	**Federal Level**	54.77	4.77	29.36	20.64	10.27	5.48
	Provincial Level	80.72	11.95	31.60	37.18	15.13	8.07
	Local Level	181.76	26.17	71.39	84.20	34.08	18.18
	Subtotal-Public	317.25	42.89	132.35	142.02	59.48	31.73
Private	Training providers	15.51	2.26	4.18	9.08	2.91	1.55
	Fee/ Parents Contribution	200.28	29.08	56.28	114.92	37.55	20.03
	Business & Industry	0.35	0.01	0.10	0.23	0.07	0.04

Sector	Cost Center	Total	Short run (80-81)	Medium run (82-85)	Long run (86-89)	Proportion of total	Annual Average
	Subtotal-Private	216.14	31.35	60.56	124.23	40.52	21.61
	Grand Total	533.39	74.24	192.91	266.25	100.00	53.34

Annex 12: Explanatory Notes on Major interventions made in TRSP

I. Backgournd and objectives

In the TVE Reform Strategic Plan (TRSP), pillarwise strategies and their interventions were developed based on the problems and issues identified by the TVE Sector Analyses Report (TVE SAR) 2022. Further explorations on this front were done during the stakeholders' consultation at Federal, Provincial and Local levels. These stakeholders included provincial parliamentarians, officials from ministries working in TVE, Business and Industry Associations (BIAs), school/ institutes instructors, principals, graduates and students, parents and media. Accordingly, recommendations/ interventions were collected/ proposed in the TRSP targeting employment first principles. However, as the interventions were presented in tabular form, making detail explanation was not possible in the TRSP document itself. Hence, this explanatory notes/ document is prepared to assist readers/ practitioners in understanding the TRSP interventions. In order to make the read comfortable, this document follows TRSP document pattern (Objectives, intervention codes and explanation).

II. Major Assumptions made for the TRSP interventions

I. The implementation can start from 2080 as many interventions do not need major preparations and do not need any legislative changes;
II. Major reform – restructuring in curriculum and its structure, educational structure and qualifications and institutional – is expected to start from 2083. It essentially mean allowing three years' time for making preparations.
III. Costs are estimated with assumption that all the required
IV. As in general education in school level, the private sector schools are expected to continue to exist.

III. Explanatory notes on interventions

1. Access, Equity and Expansion

10101	Provide access to market responsive TVE programs at local levels targeting inclusion (by also including full board scholarships to the students from local levels where it is not possible to open schools) ▪ Both long and short term training programs are expected to be offered after research in market demands. Although, it should not be difficult for short term programs, long term programs are also expected to follow this approach and the schools/ institutes offering these programs are expected to be given flexibility to make required changes. ▪ Number of Local level with TVE institutes will increase from 635 to 709. Out of 753 local levels, there will be no institutes in 44 palikas (as identified by the study) ▪ Access to learners from 44 palikas will be made available through full board scholarship - 44 palikas @10 persons = 440 per year (refer also Code: 10301)

10102-1	Provide long term TVE program ▪ The large target calls for contribution of all institutions/ organizations to offer such programs. In other words, the current programs offered by CEHRD and CTEVT (which will move to provinces) could exist and continue. However, they must be accredited by NTQAA and use NTQAA prepared standards and curriculum. ▪ Number of annual enrolment estimated to increase from 54,871 to 203,904 in long term program. (No. of annual enrollment (Estimated based on NLFS 2018/19 data) ▪ Increase utilization of existing capacity for enrollment (65% in year 2080; 75% in year 2081; 85% in year 2082 (New concept: 2 year's pre-diploma; 2 year's diploma and 1 year's advance diploma with new market demanded programs); and Advance Diploma (L5) courses. The Advance Diploma courses are expected to introduce in year 2083 which mean the TVE system as 2 years for making preparations. The increase in enrollment is expected to be possible as the schools will be allowed to offer at least 3 programs in each institutes instead of one. However, the TRSP expects around 45% institutes will be merged. All schools with below 50% enrolment will be merged. ▪ The number of programs will increase from 2543 to 4248 (each year increasing though decrease in number of institutes: after merge from 2083)
10104-1	Provide short term TVE programs for unemployed youth ▪ The large target in short term training calls for contribution of all institutions/ organizations to offer such training. However, they must be accredited by NTQAA and use NTQAA prepared standards and curriculum. They could be relevant stakeholders (CTEVT Model Schools, MoLESS, MOICS, MoCTCA, MoALD, MoWCSC, MoHP, MoYS, MoLMCP, MoFE, PGs, LLs) will conduct short term training programs (Livelihood - 50%, Level 1 - 25% and Level 2 - 25% trainings) ▪ Level 1 and Level 2 trainings will also be competency based modular, credit based as part of the long term program. They will have opportunity to further their qualifications.
10302	Increase full board scholarship quota for needy people and for ensuring social inclusion No. of full board scholarships for bipanna, females, loponmukh aadibashi, janjati, Dalit, people from remote areas, Differently able people, conflict affected 7 Provinces @ 80 persons = 560
10402-1	Expand number of school ▪ The increase in number of school is assumed to be determined by the number of students expected to enroll in that particular year ▪ The 3 COEs/ model schools are already process has already been started. Process will be initiated for the target mentioned CoEs/ model school in the year from 2080 to 2083. ▪ At least 50% of schools in urban areas and 25% of schools in rural areas will introduce multi shift learning opportunities allowing more TVE opportunities from the same school. ▪ Schools for Person with Disability is estimated to be 33 which is 2% of 1667. This proportion is taken from 2% population with disability.
10405	Establish Higher Education Fund for availing Loan for studies for Level 5 and above

	Level 5 and above could be expensive for all. Therefore, establishing Higher Education Fund with purpose to loan to deserving students is considered necessary. This facility could be used also by the students in Level 3 (Diploma level).
10501	Diversify horizontal and vertical expansion of TVE programs including on green technology/ energy and jobs ▪ Vertical level to Diploma (considered to be at NVQ Level 4) exist but does not exist beyond it. Program will launch NVQ Level 5 in 2082 and in NVQ Level 6 in 2083. ▪ Provision of horizontal expansion is limited mainly in engineering, agriculture and health sectors. This plan intends to offer vocational education in areas such as: banking, cooperatives, insurance, accounting, fashion design. Together with them, TVE system will, through sectoral feasibility studies, avail other areas of study as horizontal expansion. This is anticipated to take place starting 2081. ▪ Detailed sector feasibility studies are proposed for identifying employment potential. This is a need because many labor market studies are done but not focused in the kind of levels, competency and number of workforce is researched linking with TVE qualifications.
10601-1	Make all course curriculum modular, competency and credit based starting from 2082 ▪ Modular and competency based curricula are expected to allow students to complete specific competency in a specific module. This could allow students to continue in or exit from specific educational program. When the curricula are credit based their exit and entry will be far easier. ▪ Long term - 88 modular, competency, and credit based curricula ▪ Short term - 271 modular, competency, and credit based curricula ▪ These are examples as in response to the market demands, these numbers may vary. ▪ Open higher level TVE qualification through NTQS based multi entry and exit education structure

2. Quality and Efficiency of and in the TVE services

20101	Operationalize TVE accreditation body as a wing of National Technical Quality Assurance Authority (NTQAA) (conversion of current CTEVT) ▪ Following the demand that an agency cannot assume both implementing and quality assurance responsibility, NTQAA with quality assurance responsibility will be established. This agency is expected to be responsible for actions such as research, standards and curriculum development, accreditation, teacher preparation and licensing, assessment/ examination and certification, and recognition and equivalency. As CTEVT has gained experience in these critical areas and it takes long time to achieve them, it is sensible to convert the current CTEVT into NTQAA. ▪ The NTQAA will be responsible for 2-3 CoEs/ model schools per province for demonstration purpose.
20102	Accreditate TVE schools In order to impart quality education through various technical schools, the institutes as well as programs need to be accredited by the authorized institutes. CTEVT has currently developed accreditation system and some piloting

	has also already started. NTQAA will absorb this system and accredit 50% institutes/ programs under/ affiliated with both CTEVT and CEHRD or any other relevant sectoral ministries at all levels. The accreditation system will be applicable also for short term program providers.
20103	Operationalize instructors accreditation/ licensing system ▪ The technical teacher licensing system helps to ensure competent instructors/ teachers through in place. The technical teacher licensing system can be introduced based on competency and may be graded into three or four levels as decided by the concerned authority[7]. This also opens a career path, from level-1 to level-3/ level-4, and contributes to improving the social image and thereby help to attract competent persons to become technical teachers. This will be an excellent mechanism for distinguishing certified (trained) specialized teachers from non-certified (untrained) ones. ▪ The implementation of the technical teacher licensing system also requires alignment with the national qualification framework; and for effective implementation of the framework technical teacher licensing system must be incorporated into law. ▪ Teacher licensing could managed from Province level for all schools in its jurisdiction while NTQAA could do it through TITI for CoE/ model schools
20306	Provide higher degree educational opportunity for underqualified instructors only For Assistant Instructors, Diploma is the minimum requirement. After working for certain duration, they may be promoted as Instructors. Instructors with Diploma level are not eligible to teach for Diploma level. Hence, such instructors need to be given opportunity for higher degree education. The TVE system could avail such opportunity through study leaves and other feasible compensation systems.
20404	Establish school fund to engage instructor and student in production activities (Including earning from consultancy services by teachers and students after providing them with approved incentives/share) ▪ One of the main reasons for instructor's turnover is due to temporary nature of job with insufficient remuneration/ limited income. If they are involved in school level production activities including consultancy services, their earning and competencies will increase. In such situation, they will be motivated and will enjoy working for longer duration. ▪ This type of school fund to engage instructor and students in production activities increase their competency level and also provide them extra income.
20501-1	Make work-based learning /OJT mandatory in all TVE programs ▪ The main objectives of the work-based learning/training or OJT is to strengthen their competencies for the job role. In the institutes, learners gained necessary theoretical information with some practical skills for the occupation. The tools and equipment in the institutes may be different than the actual workplace/ industry. In such a situation, OJT provides good learning opportunity for the learners with the new technology in the actual world of work.

[7] *R.Adhikari. 2022. Technical Teachers licensing system. Kathmandu Post.*

	▪ Such learning opportunity is envisaged mandatory for all, where applicable. ▪ The duration for OJT needs to be defined by the subject experts based on the fulfillment to be carried out by learners as per NTQF level descriptors. As Pre-diploma, Diploma and higher levels of TVE all are suggested for multi exit and multi entry in the TRSP, provision of OJT need to be managed within the semester. ▪ Coordination with BIAs and public organizations for OJT placement and support to students should be clearly mentioned in the OJT guidelines.
20501-3	short term TVE courses with OJT provision Introduce provision of OJT in all short term courses to increase competency in the occupation as recommended by the subject experts based on NTQF level descriptors.
20502	Establish effective collaboration between TVE system and BIAs. Involve BIAs in following activities[8] **a) Demand forecast** ▪ Projection of skilled workers, even if it is indicative, is very crucial to make TVE effective, but no such system at national level exists. A demand forecasting system should get top priority and be regularized at national level. **b) Private sector involvement in selecting and prioritizing TVE programs** ▪ The involvement of BIAs in TVE is still largely on an individual level ▪ The private sector is involved in developing Occupational Standards through Sector Skills Committees but their limitation is also noted for their engagement only in agriculture, hospitality and construction sectors. This calls for exploring other sectors which is possible through consolation and collaboration with BIAs. BIAs involvement in curriculum development is limited and much limited in policy formulation. ▪ Formation of legislatively established Sector Skill Councils with major role to develop Occupational Standards and their involvement in the curriculum development will increase the involvement of business and industry and economic sectors role in selecting and prioritizing TVE programs.
20602-1	Ensure learning resources (standards/ curricula) NTQF level descriptors based ▪ NSTB/CTEVT has been developing occupational standards focusing the graduate of short term training programs. They do not have occupational standard for Pre-diploma and Diploma graduates of the occupation. ▪ For the operationalization of NTQF, competency standards for NVQ level 4, Level 5, Level 6 and so on, need to be developed. Based on the occupational standards, curriculum needs be developed for those levels.
20604	Reform curricula for implementation of NTQS and also facilitating of multi-exit/ entry provision for facilitating 'self-financed learning' and offering seamless academic and self/employment career path ▪ In Pre-diploma (Grade 9 - 10) with 4 semester courses, learners may exit after completion of any semester. This exit will be facilitated by appropriately credited certificate for the module while keeping the option to return to continue education individual.

[8] *Sharma. T, Nakarmi. C, and Koirala, B. 2019. Review of the Current Situation of Technical Vocational Education and Training in Nepal. Kathmandu: www.dakchyata-nepal.org*

	▪ After completing all 4 semesters, Pre-diploma certificate of the occupation will be awarded as mentioned in the curricula. ▪ Similarly, learners may exit after completion of any semester of Diploma Program. In this case, certificate for the module completed will be awarded. ▪ The competencies covered by the learners for that semester will be mentioned in the certificates awarded to the learners. ▪ This provision of multi-exit/ entry provision facilitate the learners to choose job for the completed modules and after earning can continue the learning. ▪ If the learner want to continue his/her study, s/he can join the next semester at the time when institutes start that semester.
20901	Merge schools with enrollment less than the target ratio Each school is supposed to run at least 3 programs and if the number of enrollment is less than the target ratio (50%), schools will be merged.
20903	Increase cycle completion rate is defined as the rate calculated on the basis of students who completed the study in the duration specified in the curriculum. For instance, it is the number of graduates who completed semester 1 to 4 study in one go divided by the number of students in the class. With the provision of multi entry and multi exit, possibility of drop out without completing the semester will be reduced. If the learners discontinue without completing the semester, it will be considered as drop out.
21101	Implement module/chapters/tasks based competence assessment led formative assessment for measuring learning outcomes on regular basis. Problems and project based on modules/ chapters/ tasks will be used for formative assessment of competencies instead of only theory based assessment in each institute.
21102	Establish practice of Instructors' evaluation by students Instructors' evaluation by students can be considered as effort to maintain the quality instruction. It is based on the student's experience of instructors' classroom (theory and practical) performance. Instructors quality can be assessed in Likert scale (example of the firm is enclosed here with. As this is a sample, one can add instructor's trait on it as per the requirement of the institutes.

Please trust us that completing this survey will not affect your course grade. Only the analysis of the evaluation will be shown to your instructors and not this survey sheets.

Name of the Instructor: .....

Please evaluate your instructor on a scale of 1 to 5 as shown below.

5	4	3	2	1	NA
Always	Often	Sometimes	Rarely	Never	"Not applicable" (I can't answer)

My Instructor		5	4	3	2	1	NA	Comments
1.	Begins and ends our class on time.							
2.	Is well prepared for class.							
3.	Is organized and teaches clearly.							
4.	Encourage students to ask questions and participate.							
5.	Answers questions clearly.							
6.	Knows the subject matter of this course.							
7.	Shows interest in the subject matter that we are studying.							
8.	Encourage me to think and explore new ideas.							
9.	Treats all students respectfully.							
10.	Responds to my work so I know how I'm doing and what I need to work on.							
11.	Responds to me when I need help outside of class.							
12.	Helps me meet the goals and learning objectives of the course.							

(source:https://www.losmedanos.edu/accreditation/documents/CDR.1- 12StudentEvaluationForm.pdf)

21103-1	Institutionalize practical based assessment (final examination) system ▪ In technical and vocational education (TVE) subjects, student's competencies assessment should be done. For this, necessary theoretical as well as practical skills of learners need to be assessed. ▪ In CTEVT and CEHRD, theoretical examination is emphasized and implemented with coordination of District Administration Office, security personnel. Practical competences are not assessed often. In order to assess the practical skills, problems and project based on modules/ chapters need to be assigned for final examination. Team of assessors (at least one from industry and one from the school) can be used for summative assessment to ensure practical competency.
21202	Restructure CTEVT OCEs examination/ assessment system with purpose to make it provinces connected ICT based system conduction/facilitation and certification In order to administer the test (entrance test, final tests and practical test) throughout the year, provide certificates to the successful candidates and keep complete records of individuals who have received certificates from CTEVT accredited programs: ▪ Structure of OCEs will be reviewed and restructured enabling it delivery its responsibilities on time. It will be made full house with the approved staff structure as mentioned in organogram/ structure. ▪ OCEs will delegate its examination authority at province level (through revision in relevant Byelaw) in that the examination activities (theory and practical) will be assessed at the province levels. Only the scores achieved will be shared with OCE on real-time basis.

21204	Digitalize outcomes of both formative/internal assessment and final assessment for making quick and swift (real time) The main reasons for slow result publication is assessment (formative and final exam) marks entry and exam system. Generally, it takes almost a month to complete the exams of Diploma programs as first year, second year and third year exams planned at alternate days to allow them to appear for back paper. The collection of answer copies start after the completion of exam when the staffs return back from the exam centers. When staff from OCEs also mobilized for exam management, the coding of the answer papers and copy checking activities cannot be started. ▪ The technical schools can enter the formative assessment marks by themselves in the software (real time) and the Province CTEVT office can enter the final exam marks (real time). This division of works will reduce the burden to OCEs staff and can be used for other activities of OCEs. ▪ OECs staff shall not be deputed to manage the examination in exam centers (if involved, testing procedure can be started only after the exam ends -almost one month exam period) ▪ Exam copies will be collected from the initial day of exam and the copy checking procedures can be started immediately.
30201-1	Reform standards and curricula based on NTQF level descriptors There is practice of developing standards for occupations in short term courses and no standards are developed for long term Pre-diploma and Diploma programs. However, it is necessary. Curricula for all TVE programs should be developed based on the standards. All (NVQ level 3 and above) TVE standard and curricula shall be developed based on the NTQF level descriptors to align it with the market demand. In order to develop standards and curricula based on NTQF level descriptors, experts from the industry should be involved under the lead role of Sector Skill Councils. Level 1 and 2 will also be guided by NTQF level descriptors but possibility of making them part of Level 3 will be ensured. All these will be decided by experts engaged in the standards and curriculum development process identified by Sector Skill councils.
20301-2	Revise instructors qualifications and recruitment process (written/practicum/aptitude test) to ensure qualified instructors/ teachers in place • Qualification: Required academic qualification plus at least 8 weeks long pedagogy with certification • Written examination pass • Practicum pass • Aptitude test pass • Convert all teaching position of TITI and P-TTC trainers to (professors/associate professor/assistant professors as appropriate) defining qualification so as to make the teachers/ instructors training facilities compatible to international fraternity which then will be lucrative too.

30504-1	30401	Provide incentives through legislative instruments for Tax and Custom Due to rebate Both industry and TVE institutes will be employed by the principal with the aim of improving productivity and skills of the employees, that by providing certain standard and certification, training and assessment in the workplace, they risk of damaging their machines and equipment (as they will learn on the job) and possibility to claim incentives for BIA is proposed.
30504		Conduct study on the incentive mechanisms to encourage private sector participation Apart from the above explained above, there can be other non-financial incentive options but it needs to be explored. For instance, as implemented by BIA, they are ready to provide opportunity to learners for OJT, internship and apprenticeship. Right talk to the industry/training centers itself to establish formal work-based training. Therefore, it requires the learner's development work has been done by International Labor Organization and could be government. This needs to be with TVET authorities through study.
30601	30402	Establish SSCs through legislative instruments by defining their roles, responsibilities and composition across the sector ▪ Presently NSTB/CTEVT has formed Sector Skill Committees for CTEVT to develop the standards and curriculum through workshops. In this TRSP, it is proposed to establish Sector Skill Councils (SSCs). The Councils have limited responsibility as SSCs would be as follows: ▪ Instead of Sector Skill Committees, the TRSP proposes to establish Sector Skill Councils (SSCs) through legislative instruments by defining their roles, responsibilities and composition across the TVET sector in 20 numbers by the end of 2084. However, the SSCs need to be identified through research based on NQF level, their contribution in GDP and employment.
40101		Revise/put NTQS implementation and fit new TVE Act process ▪ The NTQF is approved by Government of Nepal and has 8 levels from NVQ L1 to L8. However, the current NSTB work is focused on skill test of CTEVT graduates only. Similarly, they are not fully established. However, the current work is more aligned to the NVQF as supported by government. Therefore, the current NVQF work needs substantial shift to align with the framework and they all will provide critical support to government/ NTQAA/ CTEVT in developing ▪ Implementation of NTQF is a complex mission. Different stakeholders (politicians, parliamentarians, Ministries at all levels, TVET providers, universities, NGOs, INGOs, Sector Commissions, PABSA and media) will need to be involved in the process. Recognition of Prior Learning (RPL) from informal/non-formal learning standards, horizontal and vertical movement in formal education is a TVE challenge. Qualifications awarded from NTQAA/CTEVT should be seamlessly recognized in all private and public sectors for employment and for further productive activities. In the same spirit, these qualifications need to be recognized by National SSCs and Institutions. In this, all the stakeholders from BIA in order to ensure to be credible, responsive and balanced implementation of the policy decisions would be BIA members as far as possible, system should be in place to address through bridging inputs. It should put in place system for recognition of skills acquired also through informal and non-formal learning. During all these processes, Quality Assurance should be in place from the
	30501-1	Ensure all TVE graduates acquire 50% weightage from NTQAA/CTEVT and should be seamlessly Assessment and certification should be carried out by the competent bodies as per the standards set by BIA. The assessment should be fair, valid, reliable and flexible. Assessment should be carried out in the workplace as far as possible, in order to ensure that the assessment is practical and integrated with the normal work routine. Assessment should be carried out by the competent assessors who are certified by BIA. Assessors should be independent of the training provider. Assessment should be carried out in the workplace as far as possible, in order to ensure that the assessment is practical and integrated with the normal work routine. Assessment should be carried out by the competent assessors who are certified by BIA. Assessors should be independent of the training provider.

	beginning (research for demand collection for specific qualification, development of standards and curricula, teacher/ instructors preparation and licensing, accreditation of programs and institutes, assessment and certification) need to be trusted and accepted by all stakeholders. One of the major needs for all these to achieve various universities need to be engaged in the NTQF processes.
40102	Ensure recognition of all TVE Qualification as equivalent to General education Qualification ▪ The General Education (GE) system and the Technical and Vocational Education (TVE) system are considered as two major pillars of the education system in Nepal. The GE system has clear and defined pathways of progression and permeability opportunities whereas in most of the TVE programs, there is no progression opportunity, and these courses are like dead ends. On the other hand, TVE qualifications such as that earned from short term training, do not have academic equivalency - these programs are only for employment purposes[9]. ▪ The National Vocational Qualifications Framework (NVQF) is an integral part of NQF. In the current NVQF, it has clearly shown that all TVE Qualifications as equivalent to General education Qualification. On top of that, it has also mentioned the recognition of skills acquired through any form of learning i.e. formal, informal and non-formal learning via Recognition of Prior Learning (RPL).
40104	Revise the current NTQF Levels from L1 to L8 to clarify level 5 as advance Diploma level In the current NTQF, NVQ level 4 is considered equivalent to technical certificate and NVQ level 5 as National Diploma. However in International scenario and even in South Asia region, there is NVQ level 5 as Advance Diploma. Hence it is suggested to revise the current NTQF levels L3 as technical certificate, NVQ level 4 as Diploma and NVQ level 5 as Advance diploma.
40105-1	Introduce qualifications for Advance Diploma and Bachelors qualification level ▪ At least 19 Advance Diploma levels in Engineering, agriculture, health, and hospitality have such opportunity by the end of 2083. ▪ At least 10 Bachelor levels in Engineering, agriculture, health, and hospitality have such opportunity by the end of 2085. ▪ However, no mistakes is expected as, the TRSP has envisaged the process led by market research, economic sector studies that identifies demands for occupations with demands. In other words, the above proposals are envisaged for a decade's period but will be prioritized and decided by findings of such studies.
40106	Establish NTQS Steering Committee (NSC) (Annex 15) including membership from VC's of universities in the convenorship of NTQAA (next form major role of CTEVT) for ensuring recognition of TVE qualifications and employment through TVE Act for NTQS implementation facilitation Presently, diploma graduates of TVE can continue their qualification in general education in engineering, agriculture, hospitality and health sectors (some) in the same occupation. For TVE graduates to have easy access in general education, each and every stakeholders in the education system need to be well familiar with this NTQF and need to be guided by NSC including members from VC's of universities. TRSP envisages no issue with TVE qualifications/ certificates. Achieving it requires collaboration with universities. As this is working in other countries, there is no reason why not in Nepal. In other

[9] *Panthee, S. 2022. NTQF: A Tool For Deconstructing Social Stratification, Kathmandu: https://myrepublica.nagariknetwork.com/*

	words, there should be no reasons for persistent opinion on TVET qualifications as inferior compared to general education qualifications. Instead, it should be equal if not the vice-versa.
40107	Establish NTQS Management Committee (NMC) (Annex 16) including membership from Deans of universities in the convenorship of NTQAA (next form major role of CTEVT) for ensuring recognition of TVE qualifications and employment through TVE Act for NTQS implementation facilitation As mentioned above, the current TVE system suffers from two constraints: i) limited employment to the TVE graduates; and ii) lack of further TVE educational pathways after Diploma/ or Grade 12 completion (Figure 5.1). The Pre-Diploma graduate certificates do not carry any credit value requiring them invest another 3 years' study should they pursue Diploma level qualification. NMC as mentioned in Annex 20 will be in operation for facilitating NTQS implementation mainly focusing on its technical and management aspects.
40108	Prepare NTQS implementation manuals A complete set of NTQS implementation manuals are needed as guide for different processes of NTQS and its implementation. Till now 10 different manuals and guidelines are prepared and 16 NTQS implementation manuals are needed[10]. However, they are presumably focused on skills testing/ RPL. This calls for focusing NTQF levels and qualifications, and processes as explained in the TRSP.
40201	Enhance the preparatory TVE at the Grades 6,7, and 8 ▪ In absence of properly structured Preparatory TVE in Grades 6 to 8, students are in dilemma to make decision whether or not to enroll in Technical Stream (Grade 9) and Pre-Diploma/ Diploma after SEE graduation. ▪ As of now, in grade 6 to 8, a new subject 'Occupation, Business and Technology' is being taught to open up students towards future career prospects and providing technical and vocational soft skills in Nepal[11]. In other words, it is supposed to be preparing them or orienting them towards technical and vocational education. However, its contents appears to be just orienting the students enough to attract them towards this sector. However, it appears to be insufficient as students should also know the future after they join the TVE world. It would be useful to provide them some experience with the TVE and world of work. These aspects of education are still missing.
40306	Align existing Skills level 1 to 4 with NTQS The present Skills Level 1 to 4 certification by NSTB is for recognition for employment in that occupation. In NTQF, it is thought for qualification like NVQ level 1 to NVQ level 8. For achieving the qualification of any level, the standards and curriculum for that level will be defined by experts from BIAs upon facilitation by TVE facilitators. On the basis of such documents, the existing Skills level of the individual will be aligned and credit value for that certificate based on the standards and curricula will be awarded. However, all these details are the responsibility of standards and curriculum development process, which in other words is NTQAA responsibility.

[10] *Pradhan, H. 2019. Roadmap on Development and Operationalization of NTQS in Nepal. CTEVT/ NSTB - Swiss Contact NTQS Project, Sanothimi, Bhaktapur.*
[11] *Maskey, S. 2019. Choosing Technical Education and Vocational Training: A Narrative Inquiry. Kathmandu: https://doi.org/10.3126/jer.v9i2.30460*

40403	Align NTQF with relevant international and South Asia Regional Qualification Frameworks (SARQF) to facilitate workforce mobility across the SA borders ▪ While finalizing NTQF, it need to be aligned with SARQF and other relevant international frameworks to facilitate workforce mobility and education services within and across the South Asia Regional borders. ▪ This provision will allow recognition of our certificates and offer seamless opportunity for workers movement and getting employment as appropriately available.
50801-1	Improve Nepal Standard Classification of Occupation (NSCO) aligning with NTQF level descriptors and occupations in the existing/upcoming industries/economic sectors ▪ There exist NSCO. However, it appears not properly aligned with industry occupations and their level, neither does it so with educational qualifications. ▪ NSCO should facilitate organizing jobs into a clearly defined set of groups according to the tasks and duties undertaken in the job. ▪ NSCO should follow a scientific and hierarchical approach having major, minor and unit groups of classification and should reflect all occupations in the existing/ upcoming industries/ economic sectors available as per CBS's NSIC. ▪ Most importantly, it should be structured in such a way that the industry job classifications and TVET qualifications from qualification awarding bodies are matching, at least helping avoid confusion.
50802-1	Establish system, in collaboration with BIAs, more specifically, with SSCs for forecasting workforce demand as per NTQF aligned NSCO ▪ One of the reasons for low enrollment in TVE may be due to low employment prospectus for TVE graduates in the BIAs. Training institutes are producing workforce for the country. However, BIAs claimed that there is mismatch in competency in demand and that with new graduates which follows their opinion, that 'they are not getting workforce with required competencies within the country and forced to call from other countries and abroad'. In order to address this problem, forecasting workforce demand by the BIAs based on the NTQF level descriptors aligned with NSCO should exist. Labour market forecasts, differentiating by occupation and education, are now being created at regular intervals in a number of countries. ▪ The education/ training to be conducted should address the labour market demand i.e. need based. ▪ It is proposed to establish Workforce forecasting system in partnership with BIAS and is published in the website helping planners, policy makers and TVET providers make their actions evidence-based.
50806	Develop NSCO based needs assessment survey as pre-requisite for offering qualifications in other sectors ▪ TVE in Nepal is criticized for being supply driven. Whatever qualifications provided from the very beginning (engineering, agriculture, hospitality and health) of the establishment of the training institutes are continued till now irrespective of their absorbability in the employment market.

	▪ In order to match the number of graduates to be prepared and the required number of workforce in the job market (public and private sectors), employment market assessment survey is considered as pre-requisite for offering qualifications in the sectors like aviation, IT, banking, fashion design etc. This will reduce the unemployment of the graduates.
50901	Operationalize Communication strategy at federal, provincial and institute level As explained in the TVET Sector Analyses Report (TVET SAR 2022) and TRSP 2022, TVET is complex subject and involves many stakeholders from all governance levels – policy makers, politicians, practitioners, bureaucrats, students/ graduates and parents, and business and industry. Making their participation effective requires them understand such complexity. This could be made possible by development and operationalization of communication strategy at all levels – federal, province, local and institute/ school level.
51007	Allocate separate coordinator for program In the TRSP document, it is envisioned that each institute will run at least three program (Pre-diploma only, or Pre-diploma and Diploma, or Diploma and Advance diploma). Either there will be different occupational program or different level of occupational programs, it requires different coordinator to coordinate the programs within the institute.
60102-1	Convert CTEVT into National Quality Assurance Authority (NQAA) with main responsibility on regulatory/quality assurance (such as research, ILE resources development including chief master instructors preparation, instructors' accreditation, and assessments (academic and physical) and certification, recognition and equivalency) functions. It should be able to demonstrate the quality TVET and provide direct and/ indirect technical backstopping suitable to the current governance structure where each level considers itself equal to another. However, with the provision of current CTEVT Act, it assumes both implementation and regulatory responsibilities. As such CTEVT is overburdened with implementation responsibility of over 1000 Technical Schools. It is best envisaged to leave one of the two, preferably the implementation role. Ample justification exists why the NTQAA (after conversion of CTEVT) needs to assume the quality assurance than the implementation role. With over 30 years of experience, CTEVT has proven expertise in wide range of TVE aspects required to make TVE system operational. They include labor market research, standard/ curriculum develop/ revision, testing various TVE implementation models, teacher preparation and quality assurance including assessment and certification. With these expertise, it is best placed to provide technical backstopping and making policy advice. CTEVT constituents schools particularly, they have highly qualified (academic and training) instructional staff with capacity to manage technical schools with proven relevance to the BIAs/ economic sector. Similarly, CTEVT has also proven expertise in conducting TVE research, managing MIS (both TVE MIS and LMIS) and organizing knowledge exchange events such as subject specific workshops/ seminars and research journal publication. Hence, it is suggested to convert CTEVT into NTQAA. Achievements so far made by CTEVT are due to its expertise with the existing human resources (HR).

	Taking experience from at least two of the South Asian apex TVET Bodies (Pakistan and Bangladesh), absence of own experience gathered from schools management, it can be said the policies and quality assurance system developed will be weak. It will be difficult for these bodies to prepare impenetrable system. Therefore, for demonstration and learning purpose, as part of quality assurance responsibility, NTQAA is envisaged to implement 2-3 CoEs/ model schools in each province. In other words, these schools are considered as part of quality assurance mechanism.
60105	Revise/ update existing relevant rules, regulations and bylaws in line with new Acts and context For instance, revision of TITI, NSTB bylaws enabling them to deliver their responsibilities efficiently.

Annex 13: Explanations on financial estimates

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
Objective 10000	**Expand TVET programs ensuring access and equity, and for innovation**		
Strategy: 10100	**Ensuring balance of TVET programs among federal, provincial and local level**		
10101	Provide access to market responsive TVET programs at local levels targeting inclusion (by also including full board scholarships to the students from local levels where it is not possible to open schools)	Establishment of TVET institute in the new local level to provide access:74	Cost of feasiblity per institute: 150000 and Cost of physical verification per institute: 150000

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
10102	Provide long term TVET programs	I**ncrease utilization of existing capacity** 65% in year 2080; 75% in year 2081; 85% in year 2082 **New concept with new market demanded programs:** 2 years' pre-diploma 2 years' diploma 1-1.5 year advance diploma (L5) courses introduced in year 2083 **Minimum progrms per school** At least 3 programs in each institute **Merger** 45% institues with below 50% capacity utilized merge **Total for 10 years: 1376682**	**Total cost of program run: 53,668,000 per year** 372,000 per students and 7% cost covered by other activities thus, cost per student is 345,960. **Human Resources Cost: 30,467,000** - Principal (Officer-II)-1 person @800,000; - Vice Principal (Officer-II)-1 person @800,000; - Program Coordinator (Officer-II)-1 person*3 programs @800,000; - Instructor (Officer-III)-5 persons*3 programs @721,000; - Admin/finance Officer (Officer-III)-1 person @721,000; -Assistant Instructor (Assistant-I)-2 person*3 programs @580,000; - Admin/finance/store/library/Exam Assistant (Assistant-I)-2 persons @580,000; - Teaching Aid (Assistant-II)-1 person*3 programs @551,000; - Office Assistant(Assistant-II)-1 person @ 551,000; - Driver (bus driver + jeep driver)-2 persons @ 501,000; - Office helper-4 persons @441,000; - Security Guard-3 persons @ 329,000; **Staff welfare and capacity development** - Medical expenses of above staffs-42 persons @40,000; - Gratuity fund of above staffs-42 persons @50,000 and -Capacity Development of above staff/ instructors-42 persons @15,000);

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
			Travel and visit cost 697,680 (Program Monitoring & Evaluation- 1 person*4 days per twice month* 3 program @2850 per person day(DSA-1600 and Travel-5000); **Industry/field visit** 48 persons*2 days*3 program@570 per person day (DSA:1600, Travel-24000); **Student exhibition visit** 48 persons*2 days*3 program@570 per person day (DSA:1600, Travel-24000); **Student WEP/OJT/Block study** 48 persons*2 days*3 program@570 per person day (DSA:1600, Travel-24000));
			Physical Facilities Cost -13,205,000 (5% cost sharing of occupational equipment-12 sets*3 program @2000,000; 5% cost sharing of Mobility and outreach facilities 2 Sets @6000,000; 5% cost sharing of furniture and fixture-144 Sets @50,000; 4% cost sharing of workshop/shed-9 units @2000,000; 5% cost sharing of office equipment-10 sets @250,000; 4% cost sharing of building structure-4000 square meter @ 45,000 and 4% cost sharing of other structure-1 unit @15000,000);

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
			Office operation Cost -3,152,000 (Allowance for board/subject committee(SMC;PSU/SSU etc)-12 meeting @25,000; **Allowances** - Principal allowance-1 person @ 24,000; - Vice Principal Allowance-1 person @18,000; - Coordinator allowance- 3 persons @18,000; - Teaching allowance -7persons*3 program@30,000; - GESI focal person allowance-1 person@ 24,000; **Utilities and repair and maintenance** - Drinking water expenses-12 months@3,000; - Electricity expenses-12 months@5000; - Telephone expense-12 months@ 4,000; - Internet expenses-12 months @8000; - Courier expenses-12 months @2000; - Fuel for vehicle-2880 liters per year @200; - Maintenance of vehicle 4 times @25,000; - Maintenance of equipment- 12 months @ 10,000; - Maintenance of furniture & Fixture-12 months @ 5,000; - Maintenance of building and structure-12 months @ 10,000; - Office stationary-12 months@ 10,000; - Printing expenses-12 months @8000; - Other materials-12 months @25,000; - Newspaper/magazine -12 months@ 3,000; - Advertising and Notice publication-12 months @12,000; - Renewal and registration (vehicle and software)1 time @70,000 and - Refreshment-12 months@ 8000;

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
			Research and development cost - 1,850,000 (Demand analysis/Signaling study-1 study @450,000; - Tracer Study-1 study @ 300,000; - Impact Study-1 study @500,000; and - Publicity expenses-12 months @50,000) and
			Direct Program Cost - 4,296,000 (Teaching (practical) Material-48 students*3 program @6,000; - Part time teaching -2000 hours @600; - Soft skill instruction-120 hours@ 600; - OHS instruction cost-120 hours @ 600; - Student evaluation activities (exam) student-48 students*3 program @1,000; - recreational activities--48 students*3 program @500; - Student workplace insurance-48 students*3 program @750 and - Student community work/learning activities-48 students*3 program @2,000)
		No. of enrolment for enterprise development program -Total for 8 years: 250618 (5% to 25% from year 2082 to 2089 of total enrollment)	Start-up Costs @20000 per student and enterprise development facility @10000 per student
		No. of enrollment for self-employment -Total for 8 years: 243303 (20% from year 2082 to 2089 of total enrollment)	Start-up Costs @20000 per student

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
10103	Enhance gender balance in TVET learning opportunities	**No. of female students in TVET programs** Total for 10 years: 657434	GESI specific tools support for female student @ 1000 per student
10104	Provide short term TVET programs for unemployed youth	**No. of enrolment in short term TVET programs per annum** Total for 10 years:3114258 (Estimated based on NLFS 2018/19 data):	
		Livelihood Training (50% of total target) Total for 10 years:1557132	cost of livelihood training per trainee @10000
		Credit-based modular Level 1 (6 months) Training as per NVQ level descriptor (25% of total target) Total for 10 years:778565	Cost of level-1 (6 months duration) per trainee @40000
		Credit-based modular Level 2 (12 months) Training as per NVQ level descriptor (25% of total target) Total for 10 years:778565	Cost of level-1 (12 months duration) per trainee @70000
10200	**Expanding various TVET programs for existing worker at farm and off-farm (skilling, reskilling and up-skilling).**		
10201	Provide training to existing worker using various TVET models	**No. of trained existing worker** using roving instructional approach: Total for 10 years: 292000	cost per trainee @12000
10202	Provide training to migrant workers using various TVET models	**No. of trained migrant workers** Total for 10 years:790000	cost per trainee @10000

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
10203	Provide training to returnee migrant workers	**No. of trained returnee migrant workers** (1 month) Total for 10 years: 200000	cost per trainee @10000
10300	**Providing geographical, gender and social inclusion through various scholarship programs**		
10301	Increase full board scholarship quota for needy people and for ensuring access (from the local levels without TVET schools)	No. of students and local levels with full board scholarship to the students from local levels where it is not possible to open schools - 20 from each LLs without TVET schools. **Total for 10 years:5600**	Full Board Scholarship (Total fees minus education cost per student i.e. additional costs)@152000
10302	Increase full board scholarship quota for needy people and for ensuring social inclusion	No. of full board scholarships for bipanna, females, loponmukh aadibashi, janjati, Dalit, people from remote areas, Differently able people, conflict affected. **Total for 10 years: 10360**	Full Board Scholarship (Total fees minus education cost per student) for disadvantaged groups@152000
10303	Increase classified scholarship (Lakshit barga chattrabriti provides tuition fee free education) scheme	No. of classified scholarships per program per school:3(4) in first year and then 6(8)	Scholarship provided by Technical Schools
		No. of merit scholarships per program per school:1 in first year and then 2	Scholarship provided by Technical Schools
10304	Conduct classified scholarship entrance exam in the same centre where general entrance exam is held		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
10400	**Expanding/ abating TVET institutions/programs as per Geographical and demographical distribution**		
10401	Prepare sector education brief (Feasibility study, projection, structure)	**No. of sector education brief developed** Total 39	Cost of education brief development per sector@2500000
10402	Expand number of school	**Additional No. of schools offering long term programs:** Total in 10 years:1757	
		Additional No. of CoEs/ model schools Total in 10 years: 21 (max 3 in each province)	**Additional infrastructure costs** New establishment@ 10000000 and COE Management cost per year @1000000
		No. of short term training providers (each program per provider) Total New affiliation: 737 in 10 years	**Costs** Cost of Physical Assessment @25000 and Cost of feasibility assessment @ 25000: Total@50000
10403	Establish Schools for Person with Disability (0.13%)	**No. of schools for persons with disability** Total 33 in 10 years	Upgrade existing physical facility to make it disable-friendly (Ramp, furniture etc.) (Additional Costs)@ 500000
10500	**Scaling up of access and expansion in Technical and Vocational Education**		
10501	Diversify horizontal and vertical expansion of TVET programs including on green technology/ energy and jobs	**No. of Curriculum design in L5:** Total 19	cost of curriculum design in L5@1500000
		No. of Curriculum design in L6: Total 10	cost of curriculum design in L6@2000000

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
		No. of student enrollment in L5: Total 114813	cost of program lunch in L5 per student@175200
		No. of student enrollment in L6: Total 40362	cost of program lunch in L6 per student@525600
10502	Introduce Preparatory TVET in Grades 6 to 8	3 Nos. of Curriculum revision to introduce Preparatory TVET in Grades 6 to 8: each in 6 to 8 grade (in 2081)	cost of curriculum revision@500000
10503	Prepare sector education brief (Feasibility study, projection, structure) for L5 and above	**No. of sector education brief developed for L5 and above**: Total 25	Cost of education brief development per sector@2500000
10504	Increase sectors of economy to offer TVET programs - long and short term programs by also keeping focus on green technology/ energy and jobs		
10600	**Establishing multi entry and multi exit education structure for enhancing access to include work needing learners for 'flexile learning' and 'Learning while earning' opportunities**		
10601	Make all course curriculum modular, competency and credit based		
10602	Open higher level TVET qualification through NVQS based multi entry and exit education structure		
10700	**Establishing hostel facility for needy people**		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
10701	Establish separate hostel for girls, boys and disability for needy	**No. of existing institute have hostel facilities:** 302 and addition new institute within next 10 years: 96; Total for 10 years:398	Cost of construction of Hostel @ 27500000 and Operation cost each hostel per month@8000
10702	Develop/refurbish the current infrastructure to ensure access of LWD to instructional learning environment (ILE)	No. of Institutes for infrastructural upgradation with next 5 years: 1592	Cost of develop/refurbish the current infrastructure to ensure access of LWD@11000000
10800	**Ensuring balance of TVET programs among federal, provincial and local level**		
10801	Introduce/scale up multi shift learning opportunity		
20000	**Improve Quality (instructors, standards and curriculum, instructors preparation, physical infrastructure and examination/ assessment) and Efficiency of TVET services**		
20100	**Operationalizing the Accreditation system**		
20101	Operationalise TVET accreditation body as a wing of National Quality Assurance Authority (NQAA) (conversion of current CTEVT)	NQAA Accreditation bylaw-1 (in 2080)	Cost of NQAA Accreditation bylaw @800000
20102	Accredit ate TVET schools	**No. of Accredited institute** Total in 10 years: 2799	Cost of accrediation@300000

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
20103	Operationalise instructors accreditation/ licensing system	Development of Rules/manual for operationalising instructor accreditation/license-1 and conduct Instructors' licensing examination and certification **Total 36160** existing18602 and new:17558	Cost of development of Rules/manual for operationalising instructor accreditation/license@500000 and cost of Instructors' licensing examination and certification@1500
20200	**Ensuring the number of instructors as per curriculum requirement**		
20201	Operationalize long term TVET sector plan for instructors preparation/ development	Annual Instructors' capacity development plan -Total for 10 years: 10	Cost of annual instructors' capacity development plan@500000
20202	Hire instructors as per approved organogram	No. of New staff Hiring and selection within 10 years	Hiring and selection costs (As per PSC Norms)@45000 per person
20300	Institutionalize/Widening instructors' capacity development opportunities		
20301	Put instructors preparation plan in place	**Annual Workshop on training Plan Preparation** Teacher Training Standard Development (Workshop Plus others)-1(in 2082)	Annual Workshop cost for training Plan Preparation@500000; Workshop cost for teacher training standard development@750000
20302	Ensure instructional training to working instructors including ICT based learning management system (LMS)	**No.of instructor trained:** Total with in 10 years: 48712	Capacity Development Training Costs (As per TITI Norms)@36900

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
20303	Increase occupational skills upgradation training to instructors (including various models such as apprenticeship and enterprise development of TVET)	**No.of instructor trained in OSU** Total with in 10 years: 36160	OSU Training Costs (As per TITI Norms)@50000
20304	Provide training to management/ administrative staff	**No.of management staff trained:** Total with in 10 years: 7623	Management skill Training Costs (As per TITI Norms)@46000
20305	Provide training to MoEST and province, district and local level personnel	**No. of MoEST Personnel trained:** Total within 10 years-125	Training Costs for MoEST Personnel@60000
20306	Provide higher degree educational opportunity for underqualified instructors only	**No. of Instructors having higher degree educational opportunity:** Total within 10 year 930	Cost of higher degree educational program@800000
20400	Reducing instructors' turnover		
20401	Reduce instructors' turnover		
20402	Introduce institute organogram with provision of permanent instructors		
20403	Ensure schools have all instructors as per the approved organogram		
20404	Establish school fund to engage instructor and student in production activities (Including earning from consultancy services by teachers and students after providing them with approved incentives/share)	Update the School Fund manual-1	Cost of revision the School Fund manual@500000
20405	Reduce share of part time instructors		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
20406	Mobilized expert worker/ successful entrepreneurs from world of work to deliver lectures/ exchange session at school level		
20500	**Widening workplace based practical training**		
20501	Make work based learning /OJT mandatory in all TVET programs		
20502	Establish effective collaboration between TVET system and BIAs.	**Develop / update directives for collaboration-1;No. of students having OJT/ Workplace based training** Total with in 10 years:1376682	Cost of develop / update directives for collaboration@500000; cost of OJT/ Workplace based training@1000
20600	**Reforming learning resources (standards and curricula) to ensure all these resources are NVQS level descriptors based and facilitate 'flexile learning' and 'Learning while earning' opportunities**		
20601	Operationalize NVQS implementation manuals for aligning learning resources with NVQF level descriptors (Covered by research, standard/curriculum development, teachers' training and development, management etc.)	**No. of meetings** No. of Awareness Workshops-20 each year; No of High-level NVQS coordination committee Meetings (Tri-annual)-3 each year; No. of technical level NVQS coordination/implementation committee Meetings (Quarterly):4 each year	Cost of awareness Workshops@150000; Cost of High-level NVQS coordination committee Meetings@100000; Cost of technical level NVQS coordination/implementation committee C78Meetings@100000

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
20602	Ensure learning resources (standards/ curricula) NVQF level descriptors based		
20603	Reform standards for implementation of NVQS		
20604	Reform curricula for implementation of NVQS and also facilitating of multi-exit/ entry provision for facilitating 'self- financed learning' and offering seamless academic and self/employment career path		
20605	Ensure bridging inputs for entrance weak SEE graduates.		
20606	Customise curricula to include specific enterprise development competence with individuals enterprise development projects		
20607	Review weight of science and mathematics in curricula to ensure NVQF Level descriptor alignment		
20700	**Improving Laboratories**		
20701	Increase the share of schools/ institutes with more than 75% workable machine and equipment	**No. of institute to procure additional machine equipments with less than 75% workable machine and equipment** Total within 10 years:4555 insttitute and annual maintenance of machine equipments	Cost of machine equipment @20000000 and annual maintenance cost @9000 per students

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
20800	**Enhance cross-fertilization in ILE through ICT based distance/virtual learning and e-learning resources,**		
20801	Enhance ICT and e-learning system for distance/virtual learning (collaboration with expert teacher not available in any specific school/ province)	**No. of institute to procure ICT and e-learning system** Total within 10 years:1562 insttitute	Cost of ICT and e-learning system@2000000
20900	Improving internal efficiency		
20901	Merge schools with less than the target ratio		
20902	Maintain teacher-student ratio		
20903	Increase cycle completion rate (for students who complete specific qualification of study continuously, semester 1 to 4)		
20904	Increase survival rate (within additional 3 years time) (for students who complete specific qualification of study continuously, semester 1 to 4)		
20905	Increase promotion rate to Grade 12 (diploma level)		
21000	**Availing technical M&E system**		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
21001	Operationalize technical backstopping (Monitoring) system for Provincial and Local level	No. of Provincial level technical backstopping (Twice in every province per year) and Local level technical backstopping (Twice in every province per year monitoring 10% of LGs on rotation basis every year) **Total for 10 years:280**	Cost of backstopping at province level@250000 and Cost of backstopping at local level@500000
21100	**Operationalizing the Accreditation system**		
21101	Implement module/chapters/tasks based competence assessment led formative assessment for measuring learning outcomes	No. of students having assessment-**Total for 10 years: 1376682**	cost of documentation of assessment 25 per semester@100
21102	Establish practice of Instructors' evaluation by students		
21103	Institutionalise practical based assessment (final examination) system	**No.of students having Practical Examination** Total for 10 years: 1376682	Practical Examination Costs (Assessors etc.) (Rs. 100 per student per semester)@400
21200	**Strengthening institutional capacity of assessment/ examination system (OCEs)**		
21201	Institutionalize Office of Controller of Examination (OCEs) capacity to swiftly facilitate examination and ensuring timely certification (not more than two months)		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
21202	Restructure CTEVT OCEs examination/ assessment system with purpose to make it provinces connected ICT based system conduction/facilitation and certification	Updating and operationalizing the ITMS for OCE-1 Annual Renewal and maintenance of the ITMS **Total for 10 years: 10**	Cost of updating and operationalizing the ITMS@4000000 and Cost of annual renewal and maintenance of the ITMS@1500000
21203	Reduce the duration between final examination and certification	Establish and strengthen the examination units in each province (For answer-sheet checking, practical assessments etc.) **Total for 10 years: 70**	Annual cost of examination per province@24000000
21204	Digitalize outcomes of both formative/internal assessment and final assessment for making quick and swift (real time)		
21102	Establish practice of Instructors' evaluation by students		
21103	Institutionalise practial competence assessment (final examination) system	**No.of students having Practical Examination** Total for 10 years: 1376682	Practical Examination Costs (Assessors etc.) (Rs. 100 per student per semester)@400
30000	**Enhance outputs of TVET services**		
30100	Increasing number of graduates		
30101	Increase number of graduates in long term (pre-Diploma, Diploma and advance diploma) and short term programs		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
30200	Increasing Institutional Learning Environment (ILE) resources (standards and curricula)		
30201	Reform standards and curricula based on NVQF level descriptors	**No. of existing standard updating:** Total 225	Revision cost of existing standard@710000
		No. of new standard development in L5: Total 36	Development cost of new standard in L5@1000000
		No. of new standard development in L6: Total 18	Development cost of new standard in L6@1200000
		No. of existing curricula updating to align with NVQS level descriptors Total 150	Revision cost of existing Curricula@500000
		No. of new livelihood training curriculum development: Total 100	Development cost of new livelihood training curriculum@350000
		No. of Modular (Short-term) courses development of Pre-Diploma and Diploma: Total 320	Development cost of Modular (Short-term) courses of Pre-Diploma and Diploma@750000
		N**o. of long term curricula Level 5:** Total 36	Development cost of long term curricula Level 5@1200000
		N**o. of long term curricula Level 6:** Total 18	Development cost of long term curricula Level 6@1200000

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
30300	**Continuing publication of TVET sector research reports**		
30301	Publish TVET sector annual report annually	**No. of annual TVET sector annual report** Total 10	Development cost of TVET sector annual report@900000
30302	Continue publication of TVET journals	**2 Nos. of TVET journals published annually** Total 20	Development cost of TVET Journal@1500000
30400	**Enhancing utilization of TVET outputs (outcomes)**		
30401	Enhance employment rate of the graduates		
30402	Institutionalise NVQF level descriptor based ILE resources (standards and curricula) preparation across the sector		
30500	Increasing BIAs participants in TVET process (relevance)		
30501	Ensure all TVET bodies have at least 50% members (outside Chair) are BIA representatives		
30502	Ensure all heads of BIAs are by default members of relevance TVET bodies (CTEVT Assembly, council etc.)		
30503	Ensure TVET schools have 50% members from BIAs		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
30504	Conduct study on system for incentivising business and industry to encourage productive partnership		
30600	**Increasing number of Sector Skills Council (SSC)**		
30601	Establish SSCs through legislative instruments by defining their roles, responsibilities and incentives		
30602	Form sector skill councils (SSCs)	**Operationalizing SSCs (for LMIS facilitation, Job fairs, standard and curriculum development contribution)** Total 20	Annual operational cost per SSC for the first four years: GON might cover 100% of the costs BIAs shall/ expected to bear at least 25% of the costs from fifth year onwards **Staff requiremen** 2 staff (officer 1, assistant 1 plus office operations costs) @2300000
40000	**Ensure Integration and recognition of TVET qualifications (operationalization of NVQF)**		
40100	**Accelerating NVQS implementation process**		
40101	Revise/put NVQS implementation provision in current/new TVET Act and other relevant TVET legislative instruments		
40102	Ensure recognition of all TVET Qualification as equivalent to General education Qualification		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
40103	Revise the current NVQF to include technical education to term it as 'National TVE Qualification Framework'		
40104	Revise the current NVQF Levels from L1 to L8 to clarify level 5 as advance Diploma		
40105	Introduce qualifications for Advance Diploma and Bachelors qualification level		
40106	Establish NVQS Steering Committee (NSC) including membership from VC's of universities in the convenorship of NQAA (next form major role of CTEVT) for ensuring recognition of TVET qualifications and employment through TVET Act for NVQS implementation facilitation	**No. of coordination committees meeting (High-level NVQS coordination committee) (Tri-annual)** Total for 10 years: 30	Cost of coordination committees meeting@100000
40107	Establish NVQS Management Committee (NMC) including membership from Deans of universities in the convenorship of NQAA (next form major role of CTEVT) for ensuring recognition of TVET qualifications and employment through TVET Act for NVQS implementation facilitation	**No. of Technical level Coordination Committee meeting (Quarterly)** Total for 10 years: 40	Cost of coordination committees meeting@100000

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
40108	Prepare NVQS implementation manuals	**No. of NVQS implementation manuals** Total for10 years: 6	Cost of NVQS implementation manuals@500000
40200	**Restructuring TVET qualifications**		
40201	Enhance the preparatory TVET at the Grades 6,7, and 8		
40202	Manage bridging system to facilitate movement from TVET to General Education and Vice versa at relevant NVQ Levels		
40300	**Ensuring recognition of TVET qualifications**		
40301	Convert existing Technical Stream as Secondary qualification (from 12.5 yrs. to 12 yrs.' education)		
40302	Reduce duration of 3 yrs. Diploma program into 2 yrs. Diploma program		
40303	Convert existing Pre-diploma into Grade 9-10 qualification level (using modular and credit based)		
40304	Ensure credit value of erstwhile pre-diploma		
40305	Resolve recognition issue of TVET qualifications from Public Service Commission and Universities		
40306	Align existing Skills level 1 to 4 with NVQS		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
40400	**Integrating competencies learned in in/non formal sector**		
40401	Increase number of annual skills testing graduates	No. of skills testing participants: Total for 10 years period: 2802832	Cost of Graduation skills testing @4270
40402	Increase number of Recognition of Prior Learning (RPL) graduates	No. of RPL skills testing participants: Total for 10 years period: 280284	Cost of RPLskills testing @4270
40403	Align NVQF with relevant international and South Asia Regional Qualification Frameworks (SARQF) to facilitate workforce mobility across the SA borders		
50000	**Develop TVET Management System (HR development, school management, Knowledge Management and financing)**		
50100	Operationalising HRM plan covering federal, provincial and local level TVET authorities		
50101	Prepare HRM Plan for federal level TVET system (CTEVT, CEHRD, CDC, NEB and others)	Development of HR Plan-1	HR Plan development cost@4000000
50102	Develop HR capacities of TVET personnel at federal levels (bureaucrats and academics, BIAs) following the HRM plan		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
50103	Provide incentive/allowance head-teacher, coordinator, account personnel of TVET institute		
50104	Operationalize Federal/Provincial//Local level/school level TVET MIS (TMIS), financial MIS (FMIS) and Employment MIS (EmMIS)	Update TVET MIS, Financial MIS and EmMIS-3	Revision cost of TVET MIS, Financial MIS and EmMIS@1000000
50200	**Supporting learners through institutionalised Learners' Support System (LSS) (school management)**		
50201	Establish Learner's support system (career guidance and counselling and employment facilitation) in each school in place	**No. of Career guidance and counselling unit** Total in 10 years:12655	Operating cost of career guidance and counselling unit@ 180000
50202	Involve School executive committee (SEC) in decision making process.		
50203	Establish student support unit (SSU)		
50300	**Strengthening HR capacity for school management**		
50301	Prepare HRM plan for institute /school level	**Development of HRM Plan for Schools** Total for 10 years: 517	Development cost of HRM Plan for Schools@300000
50302	Provide School Management training to Head Teacher/Principal		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
50303	Maintain IT based tracer study system at school level annually	**Webbased Tracer study for schools(annually)** Total for 10 years: 12655	Cost of data collection for tracer study@30000
		National level tracer study(annually)-**Total for 10 years: 10**	Cost of national level tracer study@500000
50400	Ensuring required finance for quality delivery (Finance)		
50401	Provide sufficient budget to ensure quality ILE at school level		
50500	Strengthening school capacity to establish School Fund		
50501	Establish School Fund for enhancing school income with purpose to benefit students, instructors and school	**Start-up / Seed money in the school fund** Total in 10 years: 2754	Start-up / Seed money in the school fund@500000
50502	Establish production/ consultancy unit structure in schools with market linkage (through outlets)		
50600	Facilitating BIAs for availing financial incentives to students during OJT		
50601	Introduce partnership scheme with BIAs for some financial incentives to the OJT learners	**OJT Costs to be provided to BIAs:** Total for 10 years:1376682	OJT Costs to be provided to BIAs@3000
50700	Increasing knowledge exchange events (knowledge management)		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
50701	Conduct Federal level exchange meetings/seminars on TVET regularly	**No. of knowledge exchange meetings at federal level each year** Total for 10 years: 10	Cost of federal level meeting/exchange@500000
50702	Conduct province and local level exchange meetings/seminars on TVET regularly	**No. of Province with at least one knowledge exchange meetings at provincial levels each year** Total for 10 years:70	Cost of Provincial level meeting/seminar@200000
		No. of Local levels with at least one knowledge exchange meetings at local levels (All LLs cover in each 3 years) Total for 10 years: 1917 events	Cost of local level meeting/exchange@100000
		No. of schools with knowledge exchange meetings at school levels Total for 10 years: 12655	Cost of school level meeting/exchange@50000
50800	**Enhancing TVET research capacity**		
50801	Improve NSCO aligning with NVQF level descriptors and occupations in the existing/upcoming industries/economic sectors	**Survey of industry (1 times in each decade) (start 2082) and Institute level research work** Total for 10 years:1376682	Cost of survey of industry@8000000 and Cost of institute level research work per student@13000
50802	Establish system, in collaboration with BIAs, more specifically, with SSCs for forecasting workforce demand as per NVQF aligned NSCO	Workforce demand forecasting (1 times in each decade) (start 2082)-1	Cost of workforce demand forecasting@1500000
50803	Partner with CBS to incorporate NVQF based occupational-level data in		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
	National Labour Force Survey (NLFS)		
50804	Institutionalize coordination among different levels of Governments on planning of specific research and during research design and sharing the findings		
50805	Update/maintain the findings of all levels of studies in TVET knowledge management system (TMIS/EmMIS)	**Operationalizing and documentation of knowledge management activities (annually)** Total for 10 years:10	Cost of operationalizing and documentation of knowledge management activities@500000
50806	Develop NSCO based needs assessment survey as pre-requisite for offering qualifications in other sectors	New sector need assessment study: **Total for 10 years: 7 study**	Cost of sector need assessment study@1500000
50807	Conduct impact studies at national level	No. of impact studies at national level (every 3 years interval):3	Cost of impact study@4000000
50808	Continue publication of comprehensive TVET progress report	**Annual comprehensive TVET progress report** Total for 10 years: 10	Cost of Annual comprehensive TVET progress report@500000
50900	**Operationalizing Communication strategy**		
50901	Operationalize Communication strategy at federal, provincial and institute level	Prepare communication strategy at the federal level-1	Communication strategy development cost@500000
		Develop model communication strategy at provincial, local level and school level-1	Communication strategy development cost@500000

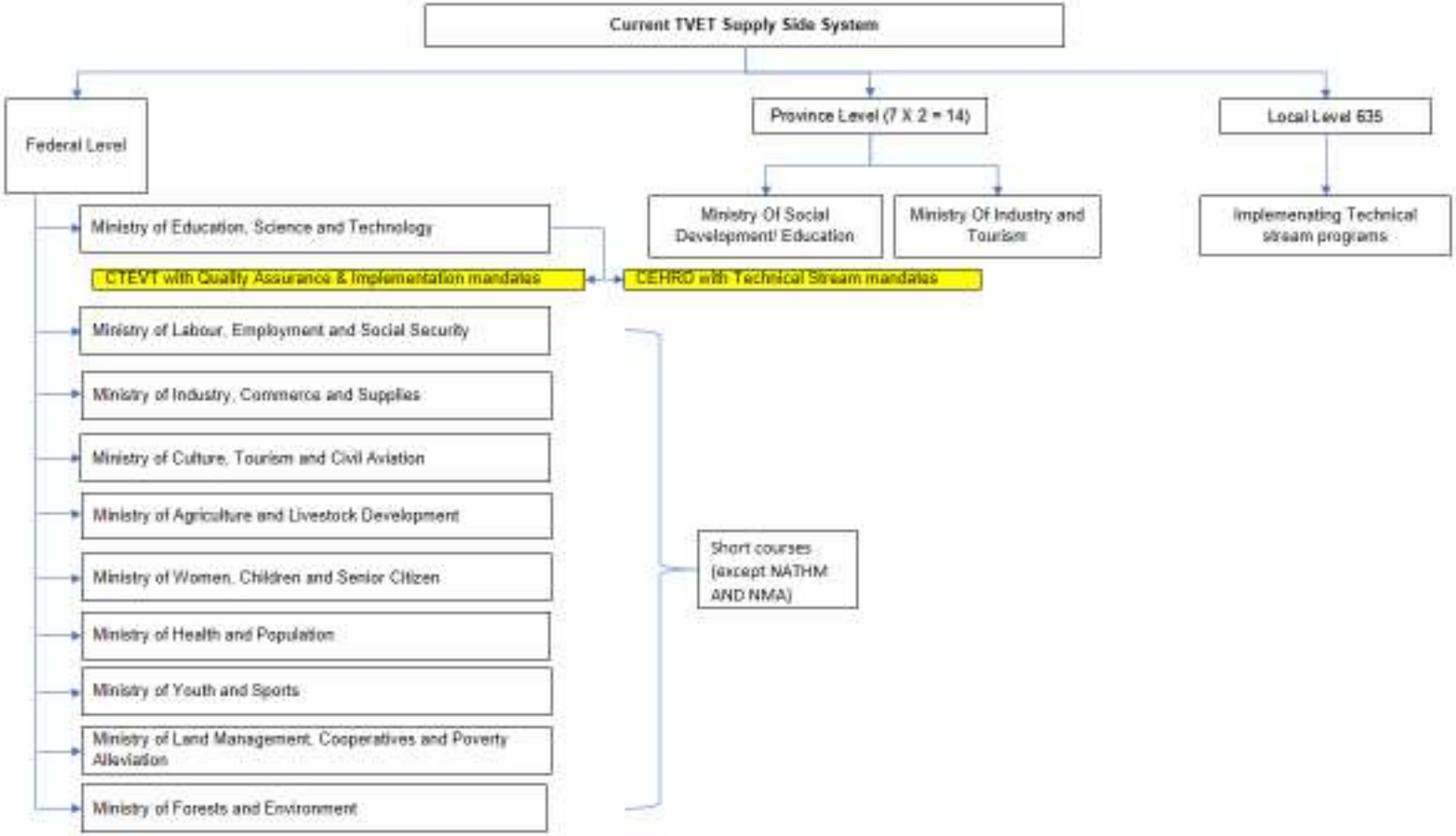
Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
		Implementation communication strategy at Federal levels Total for 10 years: 10	communication strategy Implementation cost at federal level@2000000
		Implementation communication strategy at provincial levels Total for 10 years: 70	communication strategy Implementation cost at province level@50000
		Implementation communication strategy at institute/local levels Total for 10 years: 12655	communication strategy Implementation cost at institute level @20000
51000	**Enhancing school level facilities**		
51001	Ensure toilets for both gender		
51002	Manage first aid facilities		
51003	Manage Canteen facilities		
51004	Put student grievance handling unit		
51005	Establish GESI Unit		
51006	Ensure school with head teacher with school management training		
51007	Allocate separate coordinator for eacj program		
51008	Give preference to female while making new hire to encourage gender equity		
51009	Give preference to people with disability while making new hire to encourage social inclusion		
51010	Ensure active SMC in each school		
51011	Manage electricity in schools		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
51012	Organize skill competition at province level		
51013	Organize Job fare at local level		
51014	Manage library in schools		
60000	**Improve governance and Coordination, and Financing**		
60100	**Restructuring of current TVET system through Governance instruments at federal and provincial levels**		
60101	Formulate TVET principles guided TVET Act and Rule (in context of federalization)		
60102	Convert CTEVT into National Quality Assurance Authority (NQAA) with main responsibility on regulatory/quality assurance (research, ILE resources development including chief master instructors' preparation, instructors' accreditation, and assessments (academic and physical) and certification) functions		
60103	Align NVQF with South Asia Regional Qualification Frameworks (SARQF) and relevant international frameworks to facilitate workforce mobility across the SA borders		

Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
60104	Establish autonomous Provincial TVET Authorities (TVETAs) at province level under Provincial Ministry of Social Development/ Ministry of Education		
60200	**Segregating regulatory and implementation responsibilities through new federal TVET Act**		
60201	Assign regulatory responsibility/ quality assurance responsibility to CTEVT		
60202	Assign responsibility of COEs/Model Schools to CTEVT		
60300	**Reforming TVET policies in the context of new federal and provincial TVET Acts**		
60301	Introduce stand-alone and TVET principles guided TVET Policy		
60302	Facilitate preparation of stand-alone and TVET priciples guided Provincial TVET Policy		
60400	**Enhancing coordination among and within federal, provincial and local levels**		
60401	Ensure coordination mechanism in the spirit of Federal and Provincial TVET Acts		
60500	**Enhancing TVET financing**		

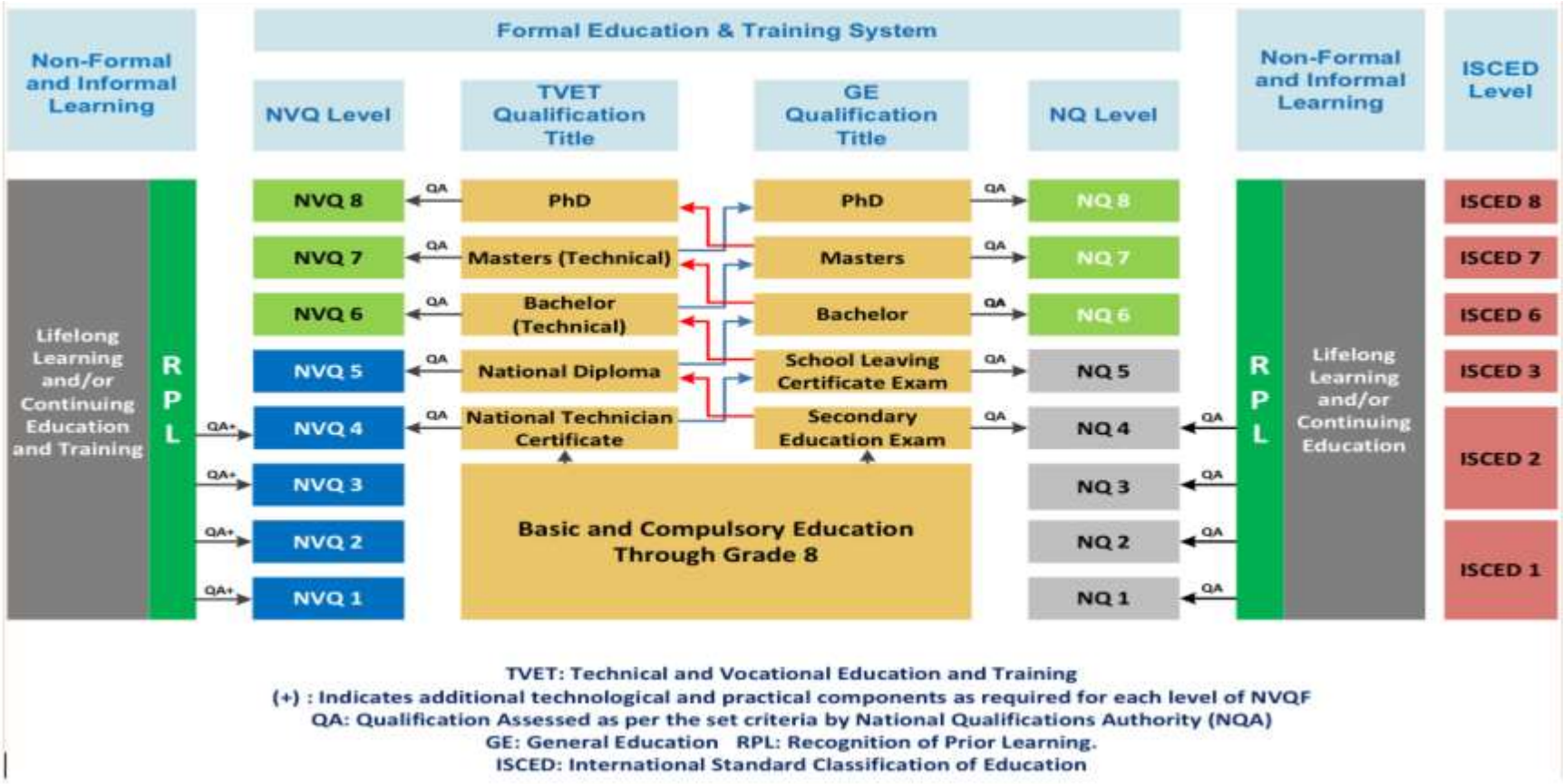
Code	Objectives/strategies/ interventions	Estimated costs	Estimated costs details
60501	SWAp Approach of financing		
60502	Affordable fee structure (Constituent, Partnership, TECS and Private)	Fee structure determination every 4 years interval-3	Cost of Fee structure determination@300000
60503	Make TVET up to diploma level free of costs (Publicly funded programs)		
60504	Access to finance (soft loan)		
60505	Facilities soft loan to new entrepreneurs		
60506	Integration in Government Accounting and reporting system		
60507	Introduce cost sharing system at three level of government		
60600	**Putting technical backstopping system in place in collaboration with federal, provincial and local levels**		
60601	Establish technical backstopping mechanism through a Joint Team of Federal, provincial and local level TVET authorities	Technical Backstopping support each year-10	Technical backstopping support cost @ 300000 per month

Annex 14: Current TVET institutional arrangement



Annex 15: Government approved NVQF

नेपाल सरकारवाट तयार राष्ट्रिय व्यावसायिक योग्यता प्रणाली

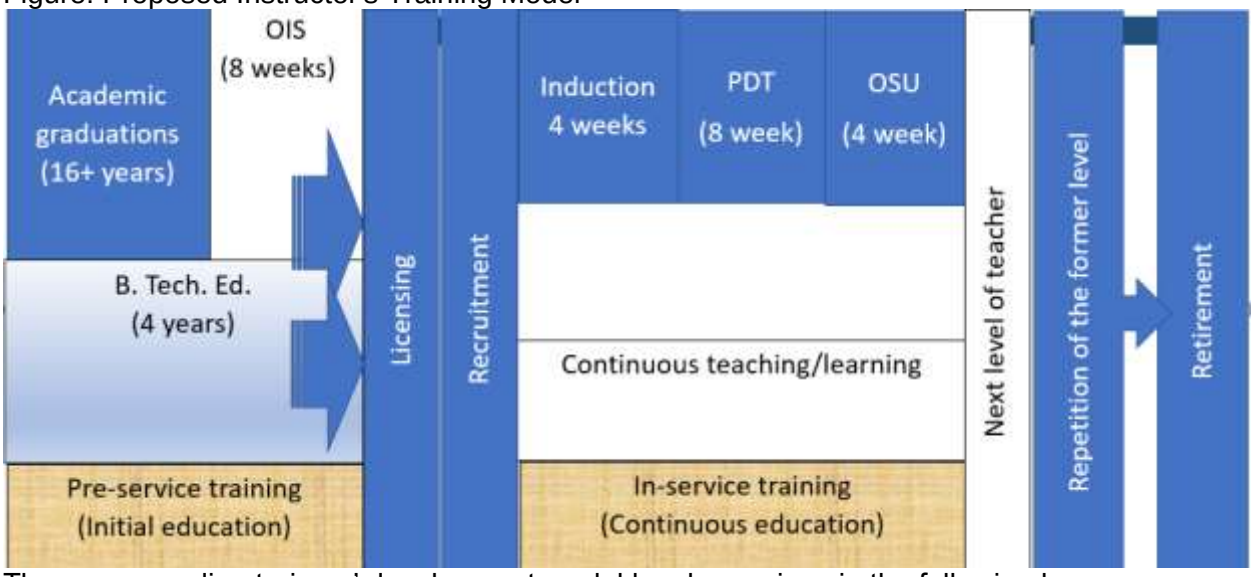


TVET: Technical and Vocational Education and Training
(+) : Indicates additional technological and practical components as required for each level of NVQF
QA: Qualification Assessed as per the set criteria by National Qualifications Authority (NQA)
GE: General Education RPL: Recognition of Prior Learning.
ISCED: International Standard Classification of Education

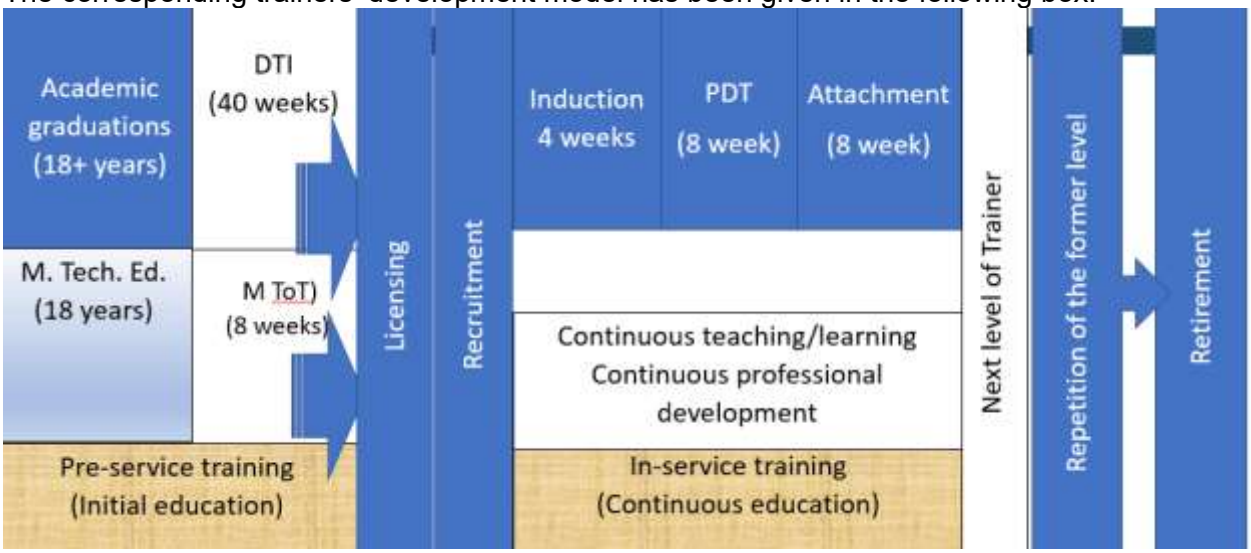
Annex 16: Proposed Instructor's Training Model[12]

The proposed pre-service and in-service teachers' development model has been presented as below.

Figure: Proposed Instructor's Training Model



The corresponding trainers' development model has been given in the following box:



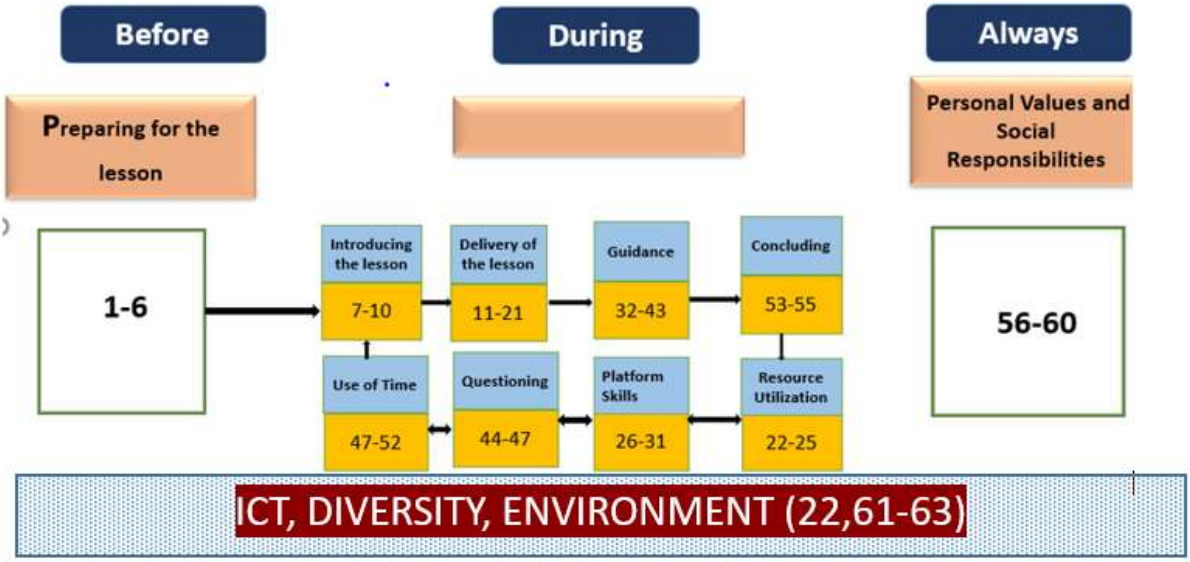
The in-service development model has been proposed to complete in an extended period of four years.

Since there is teachers licensing system already in place in general education, it is imperative to introduce it in the vocational education too. In teachers' development there are four core functions:

- Credited initial education
- Non-credited industrial experience
- Capacity development leading to licensure
- Life-long learning and continuous education and training.

[12] *This proposal is as TITI input (Mr. Mahesh Bhattrai, Executive Director).*

These are some of the existing institutional set-up and some are the proposed intervention. The important achievement that TITI has attained is that it has already developed vocational teachers' standards framework. This has been given in the following box.



The standards ultimately lead to licensing and two types of licensing have been proposed in the VTSF and they are given in the following tables:
Preliminary: Vocational teachers earn their Preliminary license by documenting that they have the appropriate industry experiences, education credentials, and content knowledge and instructional knowledge and technology. Occupational licenses or skills test certificates would be an important factor if available. This licensure will be aimed at short term training instructors and 1-8 grade vocational teachers.

Educational Credentials	Industrial Experiences	Instructional Skills	Test	Remarks
Diploma/Grade 12/Skills Test Level 3	5 years minimum	3 months IS (1,2, and 3)	Cognitive content test Performance test (Instruction)	

Professional: After obtaining preliminary licensure and having at least bachelor degree on the required field, one-year documentation of teaching as vocational teachers after preliminary licensing and dispositions documentations. The candidate will be eligible for the test of professional licensure of vocational teacher. These teachers are aimed at to teach 9-12 grades and above. This license will be renewed after five years with evidence that the person is in teaching profession.

Educational Credentials	Professional licensure	Industrial Experience	Instructional Experience	Test	Remarks

Bachelor degree		One year		Content cognitive test Performance test (instructions)	Dispositions certificate, award/appreciation letters as evidence of personal/social skills

Annex 17: Coordination Mechanism among three Government Levels

Context and rationale

After the country's federalization after the Constitution 2072, Nepal's governance has been divided into three levels, independent of each other. Accordingly, the technical and vocational education (TVE[13]) system has also been emerging in alignment with these three government levels: federal; provincial and local levels.

Following the constitutional provisions and the budget speech 2078/79 and 2079/80, the federal level is considered to have focus on quality assurance. Accordingly, CTEVT is expected to focus on quality assurance actions such as research, standards and curriculum development, federal level instructors training, accreditation and examination and certification. In analogous to these mandates. This implies making CTEVT free from schools affiliation and implementation activities. However, considering school education as local level mandate, the 9-12 technical stream schools have been managed by local levels. These two provisions clearly indicate that the rest of the TVE responsibilities i.e. management of schools above Grade 12 remains responsibility of Provincial governments.

The Issue

Although efforts on explanation of responsibilities of three government levels are made above, in absence of federal TVE Act, except for implementation of technical stream under CEHRD, the rest of the responsibilities are assumed by CTEVT. However, the curriculum development and examination roles of technical stream schools are assumed by CDC and National Examination Board. Further, in absence of Federal TVE Act, the provinces are unable to in act Provincial TVET Acts. Even that prepared by Bagmati and Gandaki have remained from being effective.
The issues with effective implementation could have been eased to some extent through coordination mechanism. However, it too has remained illusive despite nearly eight years of federal governance system. This situation has created multi-faceted problems in the TVET system and deteriorating each next day.

Proposed Coordination Mechanism

Based on inputs from various workshops conducted during the TRSP process, TVET coordination have been proposed as explained below.

[13] *This paper has proposed TVE instead of TVET, due to the following to major reasons: a) Often times, TVET is considered as 'simply training' and its broad potential is undermined; b) the word 'education' also includes training, therefore, the word 'training' is not included here; and c) the fundamental of TVET is competence development, therefore, the word 'training' already encompasses 'skills development'. Therefore, addition of 'skills development' is redundant.*

Table 1: Structure of National TVE Coordination Committee

SN	Particulars	Details		
1	**Mandating body**	Parliament		
2	**Composition of the NTCC**	**Position**	**Position in TCA**	**Number**
		Prime minister	Chair	1
		Minister, MoEST	Vice Chair	1
		Federal ministers: Labor, industry, agriculture and tourism	Member	4
		Invitee federal ministers	Member	1
		Provincial Ed. ministers	Member	5 (rotational basis)
		NPC Vice Chair	Member	
		VC, federal universities	Members	2 (rotational basis)
		Secretary, MoEST	Member	1
		Secretary, MoF	Member	1
		Chair, federal BIAs	Member	3 (rotational basis)
		National TVET Quality Assurance Authority (currently CTEVT)	Member-Secretary	1
		Total members		21
3	**Terms of Reference**	**Main responsibilities**		
		a. Review on Federal and Provincial legislative and policy instruments b. Review of Federal and Provincial Planning and budgeting c. Facilitate technical backstopping by authorized/ competent body (Federal Quality Assurance body i.e. CTEVT until new arrangement is made through new Act) and TVET bodies: i) across the federal level and ii) that between federal and province levels d. Review of progress and issues **e.** Monitoring and evaluation		
4	**Frequency of meeting**	**Bi annual**		

Entra Provincial TVET Coordination Committee (PTCC)

In order well encompass the local levels within each province, each province will have its own coordination mechanism with the following structure and ToR.

Table 2: Structure of Province TVET Coordination Committee under Model 1

SN	Particulars	Details		
2	**Composition of the PTCC**	**Position**	**Position in TCA**	**Number**
		Provincial Chief Minister	Chair	1
		Minister, MoSD	Vice Chair	1
		Secretary, Planning and Economic Commission	Member	1
		Secretary Tourism and Agriculture Ministry,	Member	1
		MoSD, Secretary	Member	1

		Chief, Provincial TVE Authority (PTVEA[14])	Member	1
		Chief sub/metropolis	Chair (of specific meeting)	4 (alphabetical order) or as applicable
		Chief Palikas	Member	6 (rotational basis)
		Chief, Provincial CTEVT[15]	Member	1
		Chair, Provincial BIAs	Member	3 (rotational basis)
		Secretary, PTVEA	Member-Secretary	1
		Total members		21
3	**Terms of Reference**	**Main responsibilities**		
		a. Review of Provincial legislative and policy instruments b. Review of Provincial Planning and budgeting c. Review of progress and issues d. Coordination with authorized/ competent body (Provincial CTEVT until new provision is made by Federal TVET Act) for managing technical backstopping **e.** Coordination with Provincial TVE Authority to manage TVET schools/ programs in the province and relevant Local levels **f.** Exchange on monitoring and evaluation		
4	**Frequency of meeting**	**Trimester**		

Entra Local level TVET Coordination Committee (LTCC)
In order well encompass the local levels within each local level, each province will have its own coordination mechanism with the following structure and ToR.

Table 2: Structure of Local level TVET Coordination Committee under Model 1

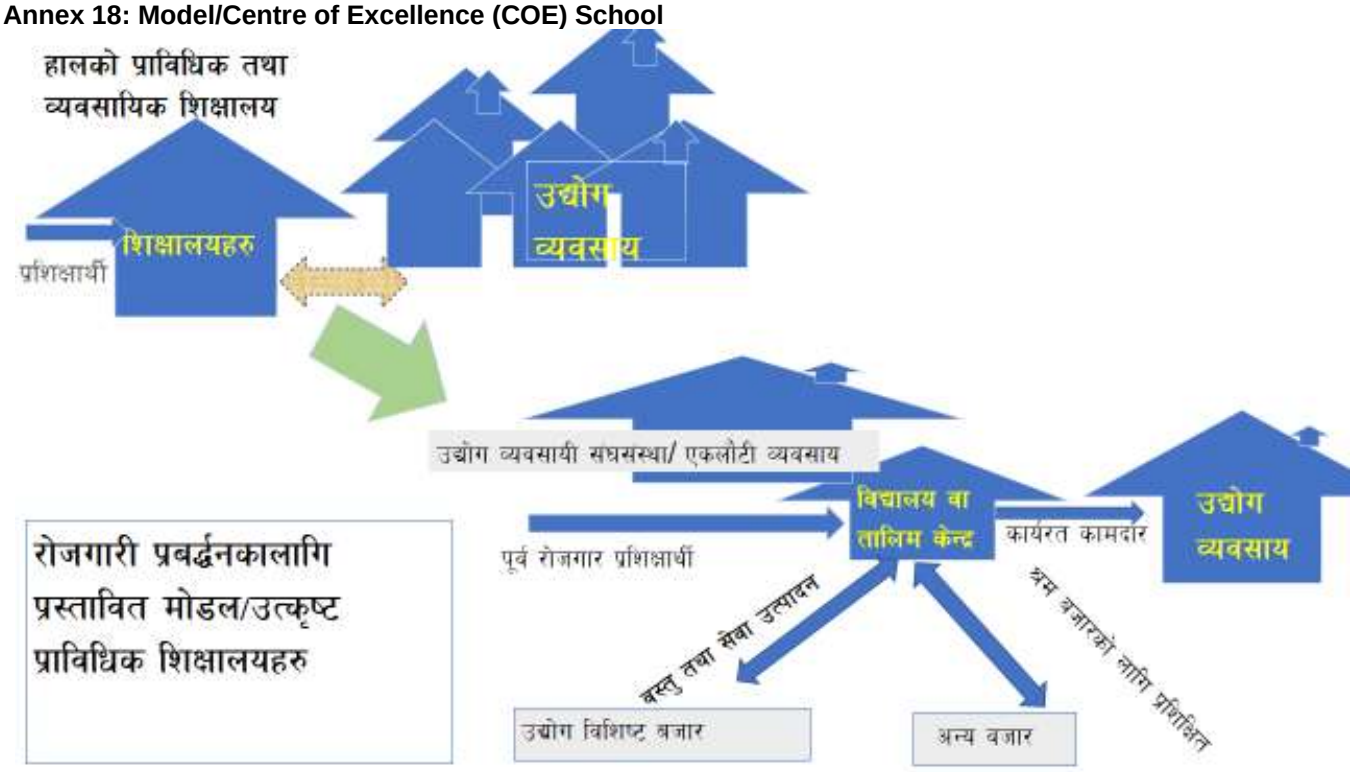
SN	**Particulars**	**Details**		
2	**Composition of the LTCC**	**Position**	**Position in TCA**	**Number**
		Mayer/Chief, Palika	Chair	1
		Chief, Education Unit	Member	1
		Chief, relevant units	Member	2
		Chief, relevant Education Development Unit (EDCU)	Member	1
		Relevant employers	Member	3 (rotational basis if more than 3)
		Relevant TVET professionals association	Member	2 (rotational basis if more than 2)

[14] In order to facilitate free interaction between business and industry/ economic sectors and Provincial TVE system, a Provincial TVE Authority (TVEA) is considered inevitable at province level. This agency will have oversight function of TVE schools implementation.

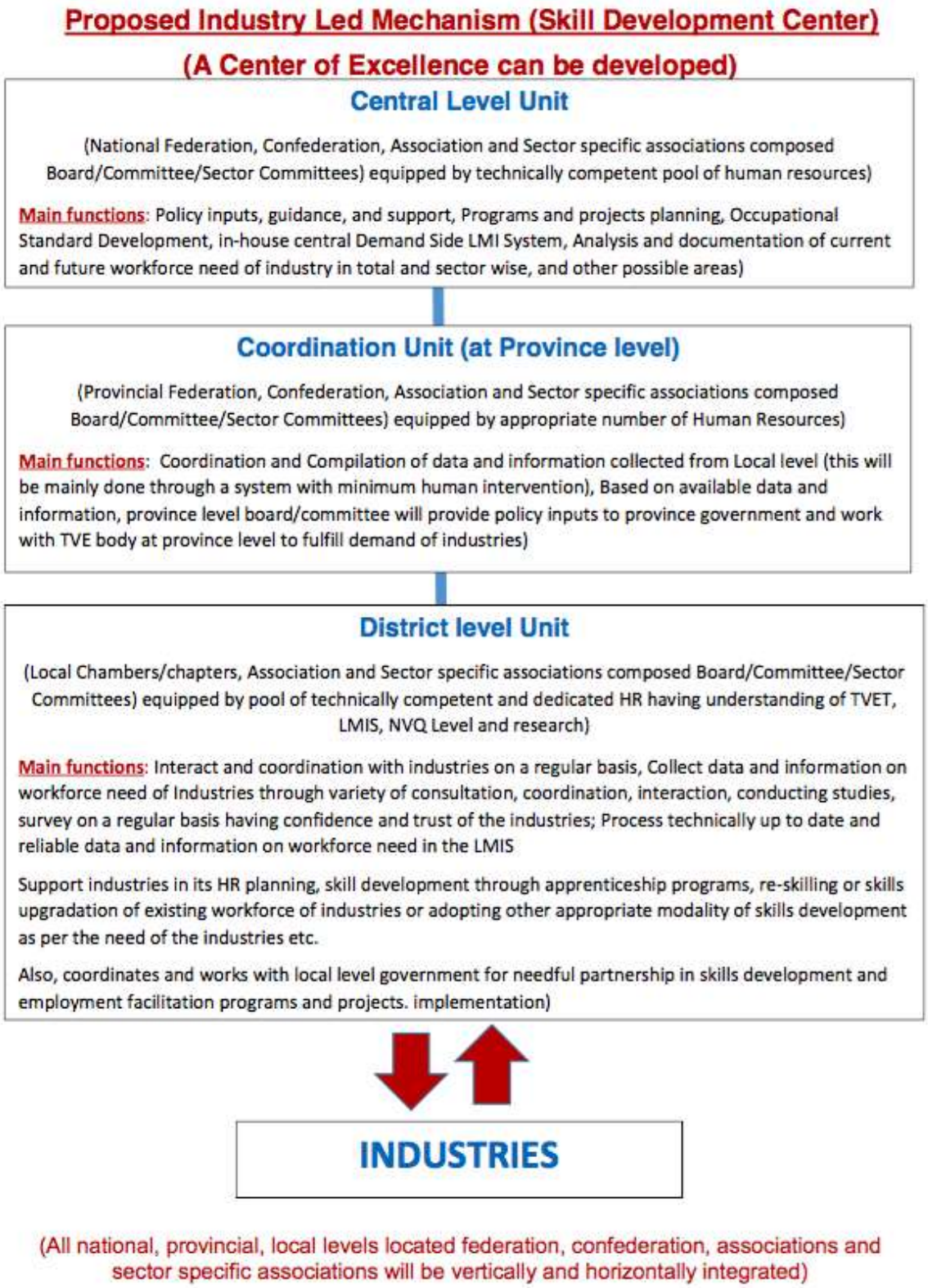
[15] Provincial CTEVT will be responsible for implementation of decentralized responsibility from the national TVE Quality Assurance Body (currently CTEVT). These include actions such as research, standard and curriculum development, facilitating examination and certification etc.

		Principal/ Head Teacher, relevant TVET School	Member-Secretary	1 (rotational basis in case of more than 1 school)
		Total members		11
3	**Terms of Reference**	**Main responsibilities**		
		a. Review of Provincial legislative and policy instruments (federal, provincial and local level) b. Review of Planning and budgeting c. Review of progress and issues d. Coordination with authorized/ competent body (Provincial CTEVT until new provision is made by Federal TVET Act) for managing technical backstopping in the local level e. Coordination with Provincial TVE Authority managing TVET schools/ programs in the Local level **f.** Exchange on monitoring and evaluation		
4	**Frequency of meeting**	**Quarterly**		

Annex 18: Model/Centre of Excellence (COE) School



Annex 19: Structure proposed as alternative to SSC



Annex 20: Returnee migrant workers nature of work in destination countries[16]

Annex 20a: Returnee migrant workers (%) according to nature (type) of work performed during lifetime employment at foreign countries among those who worked for more than one kind of

Nature of work		Gender		Province							Total
		M	W	Province-1	Province-2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	
Factory work (prod. and manufac.)		50.9	22.2	52.5	35.4	37.0	30.9	80.9	43.9	38.9	49.8
Construction labour		41.3	16.7	54.9	53.8	13.0	16.4	55.1	19.5	22.2	40.3
General labour		32.6	22.2	23.8	43.1	33.3	9.1	62.9	7.3	22.2	32.2
General cleaning labour		10.1	5.6	4.1	23.1	1.9	3.6	16.9	12.2	5.6	9.9
Agriculture (farm, plantation, livestock)		4.9	5.6	5.7	9.2	0.0	7.3	1.1	2.4	16.7	5.0
Mason, carpenter, painter		8.7	0.0	6.6	7.7	5.6	9.1	4.5	29.3	0.0	8.3
Welder, scaffold		7.5	0.0	4.1	4.6	5.6	20.0	4.5	12.2	5.6	7.2
Electrician		4.9	0.0	7.4	0.0	3.7	9.1	2.2	2.4	11.1	4.7
Shop worker		6.1	22.2	5.7	9.2	7.4	12.7	3.4	4.9	5.6	6.8
Security guard		14.6	16.7	11.5	13.8	20.4	25.5	9.0	14.6	16.7	14.6
Hotel/restaurant worker		22.3	55.6	22.1	10.8	40.7	27.3	12.4	46.3	22.2	23.6
Driving vehicles		8.5	0.0	10.7	1.5	18.5	10.9	4.5	4.9	0.0	8.1
Housekeeping		8.7	50.0	11.5	1.5	40.7	3.6	5.6	2.4	5.6	10.4
Engineering works		4.0	5.6	4.1	3.1	3.7	3.6	1.1	9.8	11.1	4.1
Other professional works		7.5	0.0	2.5	3.1	9.3	21.8	6.7	9.8	0.0	7.2
Other works		8.2	11.1	0.0	24.6	5.6	10.9	0.0	0.0	16.7	8.3
	Total (n)	426	18	122	65	54	55	89	41	18	444

Note: M=men, W=women; other works include teaching and research, AC fitting/maintenance, machinery work of vehicles/ship and other unspecified; and percentages presented in the table are obtained from the multiple responses to the question.

16

Annex 20b: Returnee migrant workers (%) according to type of work performed last time at the country of last destination of employment

Nature of work	Gender		Province							Total
	M	W	Province-1	Province-2	Bagmati	Gandaki	Lumbini	Karnali	Sudurpaschim	
Factory work (prod. and manufac.)	19.1	16.7	16.8	14.8	8.6	8.4	45.4	18.5	19.5	18.9
Construction labour	12.5	1.2	20.7	19.4	4.3	4.8	6.3	9.6	11.7	11.9
General labour	6.8	6.0	9.6	9.7	9.0	3.0	3.4	1.4	7.1	6.7
General cleaning labour	3.8	7.1	3.2	7.6	1.9	4.2	2.4	3.4	5.2	4.0
Agriculture (farm, plantation, livestock)	1.4	0.0	1.4	0.4	1.0	1.2	1.0	0.7	3.9	1.3
Mason, carpenter, painter	3.0	0.0	2.1	7.6	0.5	3.0	2.9	13.7	1.9	2.8
Welder, scaffold	3.1	0.0	0.4	3.4	1.0	11.4	1.4	2.7	2.6	2.9
Electrician	2.5	2.4	4.3	4.2	1.0	1.2	1.4	0.7	3.2	2.5
Shop worker	4.5	4.8	2.5	4.6	9.5	4.8	3.4	0.0	6.5	4.5
Security guard	8.9	2.4	8.6	5.5	8.1	13.3	6.3	12.3	7.8	8.5
Hotel/restaurant worker	17.3	26.2	14.6	6.8	30.5	18.7	13.0	24.7	22.7	17.9
Driving vehicles	6.0	0.0	7.9	3.8	11.4	6.0	3.9	2.1	1.9	5.6
Housekeeping	1.4	22.6	3.2	0.4	8.6	1.8	2.4	0.0	0.6	2.6
Engineering works	3.2	1.2	3.2	2.1	1.0	1.8	2.9	8.2	3.2	3.0
Other professional works	3.2	6.0	0.4	4.2	2.9	11.4	3.9	2.1	0.0	3.4
Other works	2.0	3.6	1.1	5.5	1.0	4.8	0.0	0.0	1.9	2.1
Total (n)	1 316	84	280	237	210	166	207	146	154	1 400

Note: M=men, W=women; other works include teaching and research and other unspecified.

Annex 21: Potential areas of occupations for study/ learning

Annex 21a: Sector: Agriculture; Forestry and Fishing[17]

S. N	Occupation	S. N	Occupation
1	Agriculture Engineer	35	Goat Keeper
2	Argo processor	36	Hatchery machine operator
3	Agriculture equipment operator	37	Hatchery technicians
4	Agriculture Technician	38	Herbal Farm Worker
5	Agriculture workers	39	Herbal producer
6	Agronomist	40	Herbal Technician
7	Apiculture Technician	41	Junior Technical Assistant (Dairy)
8	Assistant Slaughter Technician	42	JTA (Vegetable)
9	Banana Farming Technician	43	Khoto Collector
10	Bee Keeper	44	Livestock Technician
11	Cardamom Processor	45	Mushroom Grower
12	Cash crop producer	46	Nursery Assistant
13	Cattle Raiser	47	Off Season Vegetable Producer
14	Coffee Plantation Worker	48	Orchard Management Assistant
15	Coffee Processor	49	Packaging technician
16	Coffee Technician	50	Plantation technicians
17	Community Agriculture Assistant	51	Post-Harvest Technician (Fruits)
18	Community Forestry Facilitator	52	Post-Harvest Technician (Veg)
19	Community Livestock Assistant	53	Poultry supervisor
20	Compost producer	54	Poultry Technician
21	Conservation scientist	55	Programmer (hatchery)
22	Dairy and Sweets Technician	56	Riverbed Farming Technical Assistant
23	Experienced Leader Farmer	57	Seed Producer (Vegetable)
24	Farm Manager	58	Seed production (Crops)
25	Feed machine operator	59	Tea Plantation Worker
26	Fish harvester	60	Tea Processor
27	Fishery technicians	61	Tea technician
28	Floriculturist	62	Veterinary
29	Flower Decorator	63	veterinary expert (doctor)
30	Forest and conservation technician	64	Veterinary Junior Technical Assistant
31	Forester	65	Village Animal Health Worker
32	Fruit processor	66	Water resource engineer

[17] Lamichhanre, R., Ghimire, G., Chalise,B. and Koirala. S. 2021. Economic Sub-Sector and Labor Market Analysis of Nepal. Kathmandu: MoEST/SDC/ MDSI.

33	Gardener	67	Wildlife Technician
34	Garden designer	68	Zookeeper

Sector: Construction

S. N	Occupation	S.N	Occupation
1	Asphalt Technician	28	Hand Tube Well Technician
2	Backhoe Loader Operator	29	Heavy Equipment Electrician
3	Bar Bender	30	Heavy Equipment Mechanic
4	Batching Plant Operator	31	Heavy Equipment Operator
5	Bitumen Distribute Operator	32	Mason
6	Bitumen Surface Road Worker	33	Micro-hydro installer
7	Blasterer	34	Motor Grader Operator
8	Brick Layer Mason	35	Paver Operator
9	Brick Molder	36	Pipe Fitter
10	Brick Pathera	37	Plasterer
11	Building Painter	38	Plumber
12	Bulldozer Operator	39	Rat Trap Mason
13	Carpentry and Interior Decorator	40	Rig machine operator
14	Chips-Marble Polisher	41	Road Mason
15	Concrete Layer	42	Road Roller Operator
16	Construction Carpenter	43	Scaffolder (Bamboo)
17	Construction Worker	44	Scaffolder (Tubular)
18	Crane Operator	45	Short Crating Machine Operator
19	Decorative Concrete Product Producer	46	Shuttering Carpenter
20	Drafting Technician	47	Solar electrician
21	Driller	48	Steel fixture
22	Electrician	49	Stone Layer Mason
23	Excavator Operator	50	Surveyor
24	Furniture Maker	51	Tile Marble fixer
25	Gabion weaver	52	Wheel Loader Operator
26	Grader Operator	53	Wooden Furniture Polisher/ Finisher
27	Gypsum installer		

Sector: Mining & Quarrying

S. N	Occupation	S. N	Occupation
1	Auger Operator	13	Metallurgy Overseer
2	Crane Operator	14	Mine Inspector
3	Cutting and Drilling Machine Operator	15	Mine Supervisor
4	Driller	16	Mine Surveyor
5	Excavator	17	Mineral Processor
6	Field Assistant	18	Mining Engineer
7	Geologists	19	Mining Overseer
8	Ground Water Engineer	20	Plant Setter
9	Heavy Equipment Operator	21	Quarry Inspector
10	Lab Assistant/Technicians for mineralogy and soil test	22	Remote Sensing Expert
11	Mechanical Driller	23	Rigger
12	Metallurgy Engineer	24	Sub Overseer

Sector: Manufacturing

S. N	Occupation	S. N	Occupation
1	A/C technician	36	Manager
2	Accountant	37	Mechanical Engineer
3	Aromatic and Medical Plant Processing Technician	38	Mechatronics Technician (Mechanical and electronics)
4	Aluminum Fabricators	39	Melter
5	Assistant Leather Goods Technician	40	Metal Sculpture
6	Assistant Manager (Production)	41	Metallurgist
7	Bamboo Furniture Maker and Artisan	42	Milling Machine operator
8	Bamboo Handicraft Maker	43	Mithila Artist
9	Bamboo Stick Maker	44	Nepali Hand Made Paper Maker
10	Banana Fiber handicraft Producer	45	Packager
11	Binder	46	Paper Cutter
12	Boiler Operator	47	Paubha Artist
13	Cane and Bamboo Product Producer	48	Plasma Cutter
14	Chemist	49	PLC Technician
15	CNC Machine Repairer	50	Problem diagnostic Expert
16	Cold Storage Technician	51	Production Officer
17	CNC Operator	52	Production Supervisor
18	Cutting master	53	Project Coordinator
19	Designer	54	Project Manager
20	Electro-mechanical Engineer	55	Pulverization Technician
S. N	Occupation	S. N	Occupation

21	Engineer	56	Quality Controller
22	Fabricator	57	Repousse / Embosser
23	Finishing	58	Senior coordinator
24	Fire Fighting Technician (mid-level)	59	Shoe Maker
25	Fire pump assembler	60	Sliding Machine Operator
26	Food Engineer	61	Steam Drier Operator
27	Furniture Maker	62	Stick Incense Roller
28	Industrial electrician	63	Stitcher
29	Industrial Heavy Motor Re-winder	64	Tailor
30	Knitter	65	Thangku Artist
31	Laser Welding Machine Operator	66	Tharu Handicraft Maker
32	Lathe Operator	67	Upper Shoe Stitcher
33	Machine Fitter	68	Weaver
34	Machine Operator	69	Welder
35	Machine Trouble shooter	70	Wood Carver

Sector: Accommodation & Food Services

S. N	Occupation	S.N	Occupation
1	Baker	19	Indian Cuisine Cook
2	Barista	20	Laundry Technicians
3	Bartender	21	Marketing Officer
4	Bell Boy	22	Mountain Guide
5	Camp Manager	23	Nature Guide
6	Care Giver	24	Nepali Cuisine Cook
7	Chef	25	Religious Guide
8	Chinese Cuisine Cook	26	Security Guard
9	Commis (III, II, I)	27	Small Hotel & Lodge Assistant
10	Continental Cook	28	Sweets & Snacks Maker
11	Dishwasher	29	Tour Officer
12	Front Desk Officer	30	Tourists Driver
13	Gambling Inspectors	31	Travel Desk Manager
14	Homestay Operator	32	Travel Manager
15	Housekeeping Cleaner	33	Trekking Cook
16	HR Officer	34	Trekking Guide
17	ICT Operators	35	Trekking Officer
18	Information & PR Supervisor	36	Waiter/Waitress

Sector: Wholesale and retail trade; repair of motor vehicles and motorcycles

S. N	Occupation	S. N	Occupation
1	Assistant Manager	27	Light Vehicle Electrical Mechanic
2	Auto Electrician	28	Light Vehicle Engine Mechanic
3	Auto Mechanic	29	Light Vehicle Service Mechanic
4	Body Maker	30	Light Vehicle Steering and Suspension Mechanic
5	Body Mechanic	31	Light Vehicle Transmission Mechanic
6	Car Mechanic	32	Loader
7	Cashier/Accountant	33	Machine Operator
8	Chief Executive Officer	34	Middle & Heavy Vehicle Service Mechanic
9	Charging Station Technician	35	Motorcycle Mechanic
10	Chassis and Springs Maker	36	Packager
11	Cleaner	37	Auto Painting Technician
12	Denter Painter	38	Pump Set Operator & Repair Technician
13	Deputy Manager	39	Receptionist
14	Dispatcher	40	Refrigeration Technician
15	Drivers (with additional soft skills),	41	Sales Person
16	Engine Fitter	42	Security Guard
17	Enterprise development facilitator	43	Electric Vehicle Mechanic
18	Enterprise Development officer	44	Service Advisor
19	Floor In charge	45	Spare Parts Sales Person
20	Fuel Injector	46	Store Keeper
21	Fuel pump Mechanic	47	Supervisor
22	Heavy Vehicle Electrical Mechanic	48	Tractor Mechanic
23	Heavy Vehicle Mechanic	49	Tire repairer
24	Housekeeper	50	Vehicle servicing
25	Junior Auto Mechanic	51	Vehicle Welder
26	Light Vehicle Brake Mechanic		

Sector: Information and communication

S. N	Occupations	S. N	Occupations
1	Cable installer	16	LCD/LED Television Repair Technician
2	CC Camera installer	17	Manager

3	Communication center operator	18	Mobile Phone Repair Technician
4	Computer assistant	19	News reader
5	Computer Hardware Technician	20	Press mechanic
6	Computer Operator	21	Radio Repair Technician
7	Computer Programmer	22	Software developer
8	Computer Repair & Maintenance Technician	23	Software technician
9	Computer service technician	24	Systems analysts
10	Computer system designer	25	Tape Recorder Repair Technician
11	Cyber security specialist	26	Telecom Lineman
12	Digital press operator	27	Telecom Technical Helper
13	E. Book designer	28	Telecom Technician
14	Electronics fitter	29	Web and multimedia developer
15	FM Radio Technical Assistant	30	Wireless TV and network installer

Sector: Transport and Storage

S.N	Occupations
1	Accountant
2	Cargo Supervisor
3	Cashier
4	Dispatcher
5	Domestic and International Cargo Manager
6	Driver
7	Labor
8	Loader/Unloader
9	Office Secretary
10	Online Tracker
11	Packager
12	Store keeper
13	Transportation Supervisor

Sector: Electricity, gas, steam, and air conditioning supply

S. N	Occupation	S. N	Occupation
1	Armature Rewinding	17	Geotechnical surveyor
2	Cable Jointer	18	Industrial Electrician
3	Civil Engineer	19	Lighting Arrester
4	Civil Surveyor	20	Linesman
5	CNC based machine operator	21	Machine Operator
6	Designer	22	Mason
7	Electrical Appliances Repairer	23	Mechanical Engineer
8	Electrical Engineer	24	Meter Reader
9	Electrical Lineman	25	Micro Hydro Assistant
10	Electrical Motor Repairer/Rewinder	26	PLC Controller
11	Electrical Safety Technician	27	Steel Fixer
12	Electrician	28	Supervisor
13	Electronics Engineer	29	Switch Board Operator
14	Energy Auditor	30	TBM machine Operator
15	Forewarn Technician	31	Transformer Repair Technician
16	Geologist		

Sector: Water supply; sewerage, waste management

S. N	Occupations
1	Chemist
2	Driver
3	Engineer (Civil, Mechanical and Electro-Mechanical)
4	Environmental engineer
5	Foreman/Sub-Overseer
6	Heavy Equipment Operator
7	Labor
8	Machine Operator
9	Plumber
10	Repair and Maintenance Technician
11	Segregation Plant Operator
12	Waste/Garbage Collector
13	Water Pump Operator
14	Water Quality Technician

Annex 21b: Highly demanded area of the Technical and Vocational Human Resources[18]

Sector of Employment	Types of Workers Needed
Agriculture and Forestry	- Agricultural farm technicians - Livestock farm technicians - Fishery technicians - Diary technicians - Land scape and gardener - Fruits and vegetable processors
Construction	- Civil/structural engineering; Surveyors and geometrics - Electricians, electrical overseers - Heavy equipment operation and maintenance (Crawler Excavator, Motor Grader, Road Roller, Asphalt Mixing Plant, Wheel Loader). - Batching plant operator - Plumbing and sanitary ware
Tourism/Hospitality	- Waiters - Housekeeping - Innkeepers - Chefs/cooks - Front office management staff - Tourist guide - Sales/marketing - Engineers - Security guards
Health	- Laboratory technicians - Nurses
Others	- Salespersons

Source: Centeral department of economics (CEDECON), Tribuvan University/CTEVT. 2022. Labour market Analysis for Human Resources Projection., Bhaktapur:CTEVT.

[18] Central Department of Economics (CEDECON), TU. Labour Market Analysis for Human Resource Projection. Bhaktapur: CTEVT SAKCHYAMTA Project

Annex 21c: Sectors of potential innovation and employment areas
Sectors of potential innovation and employment areas

1. Communication Technology
2. Construction Technology
3. Product Technology
4. Medical Technology
5. Architecture Technology
6. Business Technology
7. Educational Technology
8. Information Technology
9. Space Technology
10. Artificial Intelligence Technology
11. Robert Technology
12. Agriculture Technology
13. Bio-Technology
14. Forestry & Environment Technology
15. Tunnel Boring Technology
16. Rail Way Technology
17. Mining Technology
18. Hydropower Technology
19. Bio-Gas Technology
20. Solar power Technology
21. Air pressure Technology
22. Aeronautic Technology
23. Ship Technology

Annex 22: Faculty applied for NOC (17.09.2077 - 06.12.2078)

Faculty	NOC Approved
Hospitality	4762
Social Worker and community services	1111
Health	4526
Engineering	11547
Vocational Training	195
TVET relevant	22141
Other scienct and technology relevant	5413
Others	42417
Total	69971

Source: MoEST 2079

Annex 23: Formation of NVQS Stereeing/ Coordination Committee (NSC)[19]

a. Prime Minister – Chair
b. Minister, MoEST
c. Vice Chancellor (VC) - 2 members on rotation basis representing all the universities
d. Vice Chair, CTEVT
e. Chair, Public Service Commission
f. Secretaries from MoEST, Ministry of Labor, Employment and Social Security (MoLESS), National Planning Commission (NPC), Public Service Commission (PSC), Ministry of Finance (MoF), Ministry of Industry, Commerce and Supplies (MoICS), Ministry of Culture, Tourism and Civil Aviation (MoCTCA), Ministry of Agriculture and Livestock Development (MoALD)
g. Secretaries from Ministry of Social Development (MoSD) – 2 members on rotation basis representing all provinces
h. Director General, Center for Education and Human Resources Development (CEHRD)
i. Chair, business and industry con/federations - 3 members
j. CTEVT Member-Secretary – Member Secretary

Roles and Responsibilities of the NSC

Broad roles and responsibilities of the NSC shall be as follows:

a. Review, approve and forward all the legislative documents submitted by (authorized body of NVQS) /CTEVT to Cabinet for further processes.
b. Provide overall guidance and supervision of the NVQS operationalization to the institutions as appropriate.
c. As a highest body with all the issues in their legal control, provide the leadership to ensure that all stakeholders align the programs being offered by institutions/bodies under their aegis to the NVQS.
d. Notify the approval and operationalization of NVQS through Nepal Government Gazette.
e. Ensure legislation and policy level coordination among NVQS related bodies at the highest level.
f. Ensure necessary sustainable funding – from public or external sources - for NVQS operationalization

[19] Pradhan, H. 2020. Roadmap on Development and Operationalization of NVQS in Nepal. Bhaktapur: CTEVT/NSTB-Swisscontact, NVQS Project

Annex 24: Formation of NVQS Management Committee (NMC)[20]

1	CTEVT Member-Secretary	Chair
2	Joint Secretaries – MoEST, MoLESS, NPC, Public Service Commission (PSC), Ministry of Industry, Commerce and Supplies (MOICS), MoCTCA, Agriculture	Member
3	Deans of relevant/ technical Universities – on rotation basis representing all relevant universities	3 members
4	Executive Director/ Chief Executive Director MoSD TVET authorities - on rotation basis representing all provinces	3 members
5	Director General, CEHRD	Member
6	CTEVT Directors – Research, curriculum, technical, Training Institute for Technical Instruction (TITI)	Members
7	Chairs, Sector Skills Councils (SSCs) - on rotation basis representing all the Sector Skills Council (SSCs)/product associations/ business and industry	5 members
8	National Skills Testing Board (NSTB) Director/ Executive Director, NMC	Member-secretary

Roles and Responsibilities of NMC

As described below, the NMC shall assume wide range of responsibilities ranging from legislation to NVQS management.

Legislative and Policy

a. Prepare and submit all the NVQS related legislative documents to the NSC.
a. Provide overall policy direction.
b. Ensure the NVQS, implementation structure and objectives are correctly structured, managed and targets are aligned with currency and are realized on agreed schedule.
c. Operationalize the decisions of Federal Inter Agency High Level Coordination Committee (F-IAHCC) with regards to qualifications' equivalency as provisioned in Chapter 5.7.1.

Technical

a. Define the sectors and subsectors, based on the National Standards for Occupation/National Industrial Classification or any other nationally accepted classification system.
b. Identify existing and upcoming occupations
c. Detail and approve level descriptors
d. Align and approve the current NSTB levels into NVQF levels
e. Approve all matters requiring cross-sectoral approach, such as modular, credit accumulation and transfer, recognition of non-formal learning, apprenticeship, online and distance learning, lateral mobility and bridge courses.
f. Approve and notify the qualification packages – standards, curriculum and teaching learning materials (TLM) - prepared by the SSCs. Including job roles that exist across various sectors.
g. Collaborate with CEHRD for extending/ adjusting TVET in Levels 1 – 3 and facilitating lifelong learning through recognition of prior learning (RPL) and necessary bridging inputs.
h. Approve the accreditation norms developed in collaboration with the relevant SSCs for training providers/ Knowledge and skills (KSP).

[20] Pradhan, H. 2020. Roadmap on Development and Operationalization of NVQS in Nepal. Bhaktapur: CTEVT/NSTB-Swisscontact, NVQS Project

i. Develop/approve the accreditation norms for QABs/certification agencies – Office of Controller of Examination, National Examination Board (NEB) and National Skills Testing Board (NSTB) and implementing bodies.
j. Accredit QABs and implementing institutions.
k. Coordinate and align national qualifications with international qualifications frameworks to allow international mobility.
l. Addressing all transition issues, including developing suitable mechanism for recognizing and aligning to the NVQS all qualifications.
m. Map all existing certificate, diploma, degree and other courses available in the sector, and identify gaps if any.
n. Determine whether progression from one level to another should be allowed for a specific course/discipline
o. Determine bridging inputs necessary for vertical progression within and across the education streams
p. Map all the progression pathways so determined and agreed, and decide how the progression will take place – how much credit would be allowed for movement from one level to the next and from one education pathway to another, and how such progression can be facilitated
q. Determine progression links between courses and certifications that are granted by regulatory and/or professional bodies, and those that are currently unregulated
r. Identify and specify bridge courses and processes if any, that would be needed to permit progression from one level to another
s. Manage and coordinate management of NVQ Registry.
t. Develop the qualification packages (QPs) targeting competency based learning and assessment (CBL&A)
u. Facilitate chief master trainers/ instructors' and master assessors' training, and
v. Ensure, as applicable, inter provincial cross fertilization through provincial master trainers or assessors training.

Planning and Management

a. Facilitate strengthening/establishing SSCs.
b. Prescribe guidelines for ensuring that implementing agencies, including knowledge and skills (training) providers, address the special needs of women and disadvantaged population including persons with disabilities, minorities/ depleting populations.
c. Review and resolve any issues/disputes among Ministries/ Departments/ Regulatory Bodies regarding alignment of courses to NVQF, credit transfer, etc.
b. Continue to steer and strengthen the NSTB which is envisaged to function as Federal NVQ Support Unit (F-NSU). Hence, establish and operationalize the F-NSU as NVQS focal unit.
c. Operationalize the NVQF to ensure that quality and standards meet the industry/employment sector requirements.
d. Facilitate capacity building of all stakeholders.
e. Oversee and customize the existing professional certifying bodies – Office of the Controller of Examinations and NSTB under CTEVT and NEB.
f. Ensure that the NVQF serves as a quality assurance framework.
g. Decide date to phase out the current CTEVT standards and curricula.
h. Fund and/or facilitate funding to the programs/ courses that follow the NMC approved QPs.
i. Manage capacity development program of all relevant staff and stakeholders.

Coordination and Social Marketing

a. Ensure policy and technical level coordination among NVQS related bodies at federal and provincial levels and with local governments, as appropriate.
b. Ensure effective social marketing of and policy dialogue around NVQS.

TVET Reform Strategic Plan (TRSP) 2080-2089

VISION: Competent entrepreneurial workforce for 'Tranformative and Prosperous Nepal'

MISSION: TVE system reformed for preparing competent entreprenurial workforce making it truly a 'garikhane sikshya ' through the TVE Principles-based TVE Acts.

GOAL: Prepare globally competitive industry-ready and entrepreneurial workforce with capacity to contribute to "Make in Nepal" initiative with ensured recognition and seamless further educational opportunity at all levels.

OBJECTIVES AND STRATEGIES

Area	Access, Equity, and Expansion	Quality and Efficiency	Results and Relevance	Integration	Management	Governance, Coordination, and Financing
	Expand TVET programs ensuring access and equity, and for innovation - Ensuring balance of demand-based industry/ economic sectors responsive TVE programs among federal, provincial and local levels by 2089. - Expanding various TVE programs for existing worker at farm and off-farm (skilling, reskilling and up-skilling) sectors by 2089. - Up-scaling skilling opportunity (skilling, reskilling and up-skilling) for migrants and returnees by 2089. - Enhancing geographical, gender and social inclusion through various scholarship programs by 2089. - Expanding/ abating TVET institutions/programs as per Geographical and demographical distribution by 2089. - Scaling up of access and expansion in Technical and Vocational Education by 2089. - Establishing multi entry and multi exit education structure for enhancing access to both education and work (for 'Flexile learning' and 'Earning while learning') by 2089.	**Improve Quality (instructors, standards and curricula, instructors' preparation, physical infrastructure and examination/ assessment) and Efficiency of TVE services** - Operationalizing the Accreditation system and facilitating its recognition in international level as well by 2089. - Ensuring the number of instructors as per curriculum requirement by 2089. - Ensuring quality instructional staff in place and institutionalizing their capacity development opportunities by 2089. - Reducing instructors' turnover by 2083. - Widening workplace based practical training by 2089. - Revising entry criteria and with purpose to support ing weak students, putting bridging inputs by 2089 - Improving Laboratories by 2089. - Enhance cross-fertilization in ILE through ICT based distance/virtual learning and e-learning resources by 2089. - Improving internal efficiency by 2089. - Availing technical M&E system by 2089. - Enhancing assessment system by 2089. - Strengthening institutional capacity of assessment/ examination system (OCEs) by 2089. - Managing accredited skill test centres by 2089.	**Enhance outputs/ outcomes and relevance of TVE services** - Continuing publication of TVE sector research reports by 2089. - Developing NVQF based learning resources to facilitate 'flexile learning' and 'Learning while earning' opportunities by including enterprise development components to contribute to 'Make in Nepal' initiative by 2089. - Increasing number of graduates by 2089. - Enhancing utilization of TVE outputs (outcomes) and relevance by 2089. - Increasing BIAs participants in TVE processes for relevance by 2082. - Increasing number of Sector Skills Council (SSC) for relevance by 2089.	**Ensure Integration and recognition of TVE qualifications** - Accelerating NVQS implementation process by 2085. - Restructuring TVE qualifications by 2084. - Ensuring recognition of TVE qualifications by 2082. - Integrating competencies learned in in/non formal sector by 2089. - Emphasizing cross-learning in different sectors by 2089. - Accelerating workplace based practices/ intern system in public as well as private sectors including households by 2089.	**Develop TVE Management System (HR development, school management, Knowledge Management and financing)** - Enhancing institutional including human resources capacity covering federal, provincial and local levels TVET authorities by 2089. - Supporting learners through institutionalised Learners' Support System (LSS) (school management) by 2089. - Strengthening HR capacity for school management by 2089. - Ensuring required finance for quality delivery (Finance) by 2089. - Strengthening school capacity to establish School Fund by 2089. - Facilitating BIAs for availing financial incentives to students during OJT - Increasing knowledge exchange events (knowledge management) by 2089. - Enhancing TVE research management capacity by 2089. - Operationalizing Communication strategy by 2089. - Enhancing school level facilities by 2084.	**Improve governance and Coordination, and Financing** - Restructuring of current TVET system through Governance instruments at federal, provincial and local levels by 2083. - Segregating regulatory and implementation responsibilities through new federal TVE Act by 2089. - Reforming TVE policies in the context of new federal, provincial and local level TVE Acts by 2089. - Enhancing coordination among and within federal, provincial and local levels for synergy and coherence by 2089. - Enhancing TVE financing and its regulation with standard indicators by 2089. - Putting technical backstopping system in place in collaboration with federal, provincial and local levels by 2089.