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Research Report

External evaluation: National Vocational Qualifications System project

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External Evaluation

National Vocational Qualifications System Project

Katherine Caves and Ursula Renold

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External Evaluation

National Vocational Qualifications System Project

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Expert Biographies



Dr. Katherine Caves

Postdoctoral researcher in the research centre for comparative education systems at the Swiss Federal Institute of Technology (ETH) in Zurich.

Katherine Caves began her studies at the University of California at Berkeley, earned her master's degree in the field of Education, then studied the economics of education at the University of Zurich for her PhD. Her research interests centre around the economic, institutional, and infrastructure foundations of strong technical and vocational education and training (TVET) systems all over the world, especially what those foundations are in successful TVET systems and how they can be developed in nascent TVET systems. She also examines TVET reform implementation through the Centre for the Economics and

Management of Education and Training Systems (CEMETS).



Prof. Dr. Ursula Renold

Head of the research centre for comparative education systems at the Swiss Federal Institute of Technology (ETH) in Zurich. Co-Director of the Centre on the Economics and Management of Education and Training Systems (CEMETS).

In addition, she is Chairman of the University Board of the University of Applied Sciences and Arts, North-western Switzerland. She was a Visiting Fellow at the Harvard Graduate School of Education between September 2012 and March 2013.

Prior to this, Renold was Director General of the Federal Office for Professional Education and Technology (OPET) until June 2012. In this position, she headed Switzerland's competence centre for professional education, the universities of applied sciences, and led programme innovation starting in 2005. Before becoming Director General, she was head of OPET's Vocational Education and Training Division and Director of the Swiss Federal Institute of Vocational Education and Training (VET teacher education). During her career, Renold has launched numerous key initiatives that have had great impact on the Vocational and Professional Education and Training system in Switzerland.

Dr. Renold was responsible for the transition process in the wake of Switzerland's constitutional reform of 1999, in which the occupational fields of health, social work, art, agriculture, and forestry became federal competences under one ministry. She has also been involved in the constitutional reform of 2006 and was involved in all related legal reforms in the field of higher education, vocational and professional education and training, continuing education, and the education monitoring process. She holds an honorary Professorship in Professional Education at the University of Applied Labour Studies in Mannheim (Germany).

Executive Summary

The **NVQS project** began in 2015, running in three phases through 2023. The project’s overall goal is to contribute to building a sustainable system of national vocational qualifications in Nepal. This work should lead to three primary outcomes: a **Nepal Vocational Qualifications System** (NVQS), including a **National Vocational Qualifications Framework** (NVQF), and **National Vocational Qualifications Authority** (NVQA). National Qualifications Frameworks (NQFs) are a global phenomenon intended to help drive transparency, permeability, quality, and employer engagement in education (CEDEFOP, 2010).

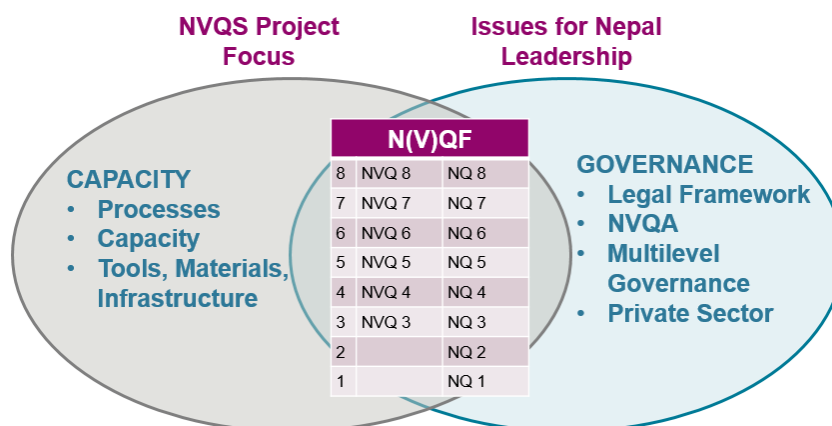
The purpose of this external evaluation (EE) is to support the design of the NVQS project’s future by reflecting on the Phase 1 achievements of the NVQS, interviewing key stakeholders, and bringing a long-term perspective to bear on the project’s goals and possibilities. The self-evaluation (SE), completed in May of 2018, reports extensively and thoroughly on the activities and operational achievements of the project in its first three years. This EE finds that the project has had a successful first phase, needs minor revision, and can build on its challenges.

Project Focus

The **NVQS project** and the NVQS itself are not the same thing, and though both overlap with the TVET sector and TVET federalisation, those are also separate. This is an important distinction for keeping the project efficient and effective, and even more so for making its outcomes sustainable and relevant. Figure E3 shows this on the simple model of NVQS scope and shows how all three elements of the future NVQS—NVQF, NVQA, and the NVQS overall—are interlinked. Crucially, it also shows that the project’s area of influence is limited, with many aspects of the overall system up to Nepal’s leadership.

The NVQF lies at the centre of the figure, with the system’s governance (in teal) on the right and its capacity as a system (in grey) on the left. NVQS governance is formalised in a legal framework, most likely the upcoming Federal Education Act and/or Integrated TVET Act. That legal framework also establishes the governing agency or agencies for NVQS as well as the TVET sector overall, how responsibilities are allocated to levels, and what the role of the private sector will be. As shown in Figure E3, these are all areas under the jurisdiction and ownership of Nepal’s leaders.

Figure E3: NVQS project focus in overall NVQS



Source: Depiction by authors

In grey on the left side of the figure, however, is the area the NVQS project can support. This is the capacity that enables the future NVQS to run smoothly and effectively. These are the detailed

processes of key NVQS functions like developing NOSS, converting those NOSS into assessments and RPL procedures, and maintaining quality. The project can contribute a great deal here.

The NVQF is not itself the TVET system, only the map of programmes and progression routes. However, it is central to the system overall. The NVQF defines how programmes relate to one another and how individuals can move from one programme or pathway to another. With an NVQF, it is clear how different programmes relate across pathways and how curricula within a given programme—for example different occupations at the same TVET level—can be compared. With good governance defined by the legal framework and good processes supported by the project and implemented by the new NVQA, the NVQS can effectively serve Nepal’s TVET sector.

Recommendation 1

Focus the NVQS project on **building NVQS capacity**, keeping the project separate from the system to which it contributes.

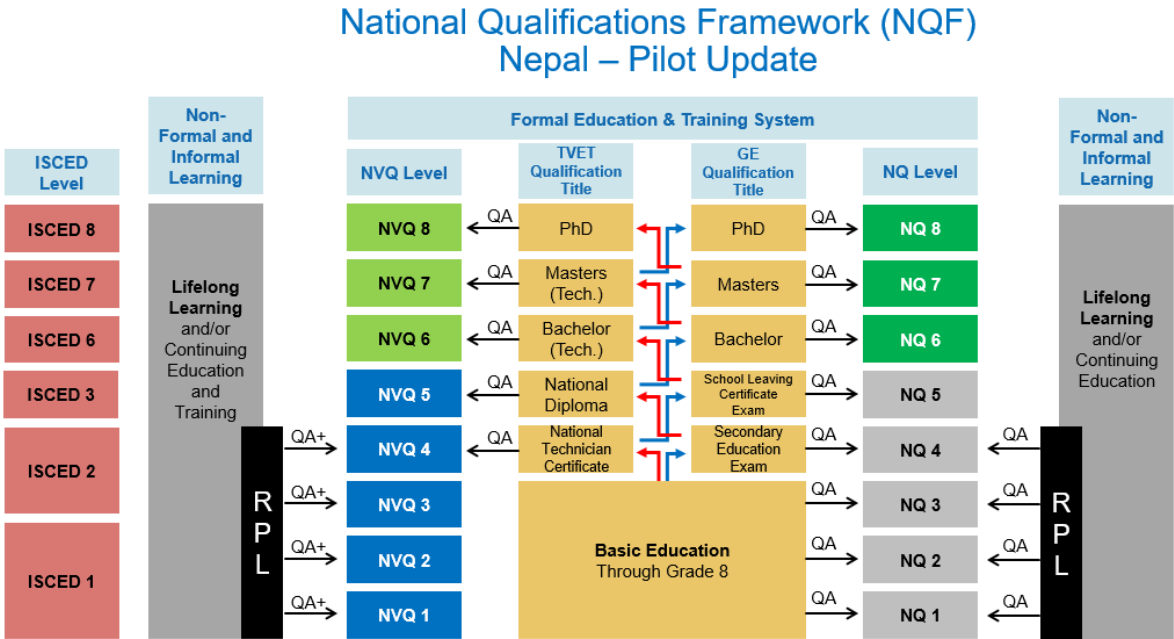
To build NVQS capacity, develop processes, describe and develop necessary human resources, tools, and materials.

Focus first on **developing processes**. Write processes for general usage, so they can be applied by whichever ministry, agency, or governance level is assigned responsibility in the upcoming legal framework.

Finalising the NVQF

The present version of the NQF, shown in Figure E1, does an excellent job of clarifying relationships among programs, showing vertical and horizontal mobility options for a fully permeable system, and using RPL as a mechanism to bring knowledge and skills from non-formal and informal learning into the formal qualification system. This is the most recent of dozens of iterations of the framework, and represents a great deal of stakeholder consensus including various government ministries, the private sector, and experts from Nepal and abroad.

Figure E1: Current NQF with ISCED levels added for reference



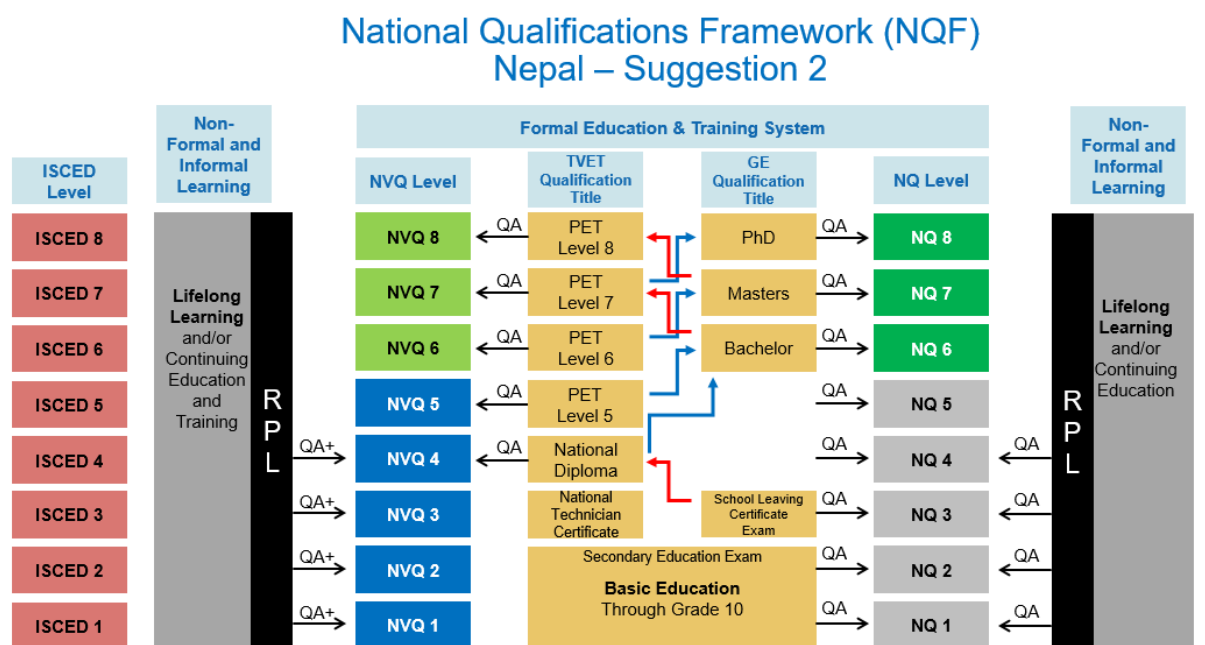
There are four key areas where the model can be improved even further:

- High-level RPL
- High-level TVET
- Consideration of all ISCED levels
- Alignment of 8 NVQF levels to 8 ISCED levels, especially in levels 1-3

Fully aligning to ISCED allows Nepal’s NQF to be internationally transparent and comparable. This improves mobility for individuals wishing to train, learn, or work abroad. Starting with a fully aligned framework also puts Nepal ahead of the curve, so it will not have to revise its framework later to fit ISCED as other countries in the region are already doing. Figure E2 shows our suggestion for improvements in the future.

Our main revisions are on levels 1-3. Levels 1 and 2 are primary and lower secondary education. At level 3, upper secondary education, there are differentiated TVET and general education options for the first time. Levels 5-8 offer higher TVET diplomas or Professional Education and Training (PET) diplomas.

Figure E2: Suggested NQF with ISCED levels added for reference



Source: Depiction by authors

Recommendation 2

Implement the model described in Figure E2 as Suggestion 2. This aligns with Nepal’s NQF goals, the TVET Task Force Report, and international best practices.

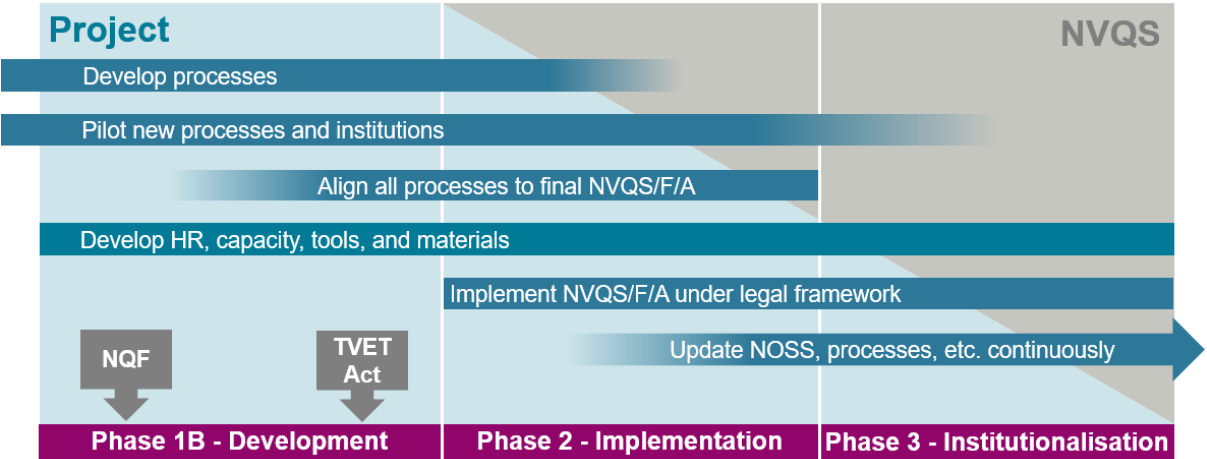
Strategic Design

Phase 1 of the NVQS project ends in July 2019. At this point, based on the interviews conducted during the fact-finding mission, it appears that the formal NQF including NVQF and the Federal Education Act and/or Integrated TVET Act will be available within a year of that date. Therefore, we recommend to extend Phase 1 by one year (or until the legal framework is available) to continue development, followed by Phase 2 implementation under a clear legal framework starting in July

2020 (or when the new structures are in place). That implementation phase will involve transferring all processes and tasks to the new responsible authorities and agencies.

Phase 3 will be institutionalisation, with the goal being a sustainable NVQS owned, operated, and advocated for by Nepal’s TVET leaders. Figure E4 summarises the overall strategic plan. Over time, the **NVQS project** (in teal) yields to the NVQS under NVQA leadership (in grey), with NVQA running, maintaining, and updating the system. This is key for sustainability—the system must run on its own.

Figure E4: Strategic plan for developing the NVQS Project into a sustainable NVQS



Source: Depiction by authors

Recommendation 3

Extend Phase 1 of the project for one year, to July 2020 (or until the new legal framework is available).

In Phase 1B: Develop all necessary processes, pilot those processes, formalise and apply lessons from pilots. Calculate the necessary resources for the future system for all processes.

Do not begin Phase 2 until the legal framework is in place.

In Phase 2: Implement NVQA/F/S, finish any remaining processes, develop additional capacity and HR. For capacity and HR development, create processes and materials that enable development, support staff training for pilots and first-run implementation, and work towards NVQA becoming self-sufficient.

In Phase 3: Institutionalise NVQA/F/S by stepping back donor partner support gradually, establishing ongoing updating processes, and handing over NVQS fully to NVQA.

Priorities and Processes

The NVQS project’s focus for Phase 1B is developing processes. There are four overarching themes affecting process: quality, capacity development, employer engagement, and gender equity and social inclusion (GESI). Every process also needs to include detailed budget calculations.

Recommendation 4a

Consider **quality, capacity development, employers’ role,** and **GESI** considerations, and include budget calculations in every process.

The main processes areas are NOSS, assessments, RPL, administration, and monitoring. Table E1 summarises the key processes within each process area. Processes should be modular and portable so they can be divided and allocated to actors however the legal framework requires. Processes must also be complete so implementers can begin immediately. This means they need to include time, financial resources for materials and staff, and HR requirements as well as the functional steps of the process.

Table E1: Process areas and key processes	
Process Area	Key Processes
NOSS	NOSS Development & Maintenance Employer Access & Inclusion Programme On-Boarding
Assessments	Assessment Development & Maintenance Assessor Training Assessment Centre Piloting & Setup
RPL	RPL Tools Development RPL Delivery Piloting & Setup
Administration	Marketing & Information System Monitoring NVQA Setup
Quality	NOSS Accreditation Assessment Centre Accreditation Assessor Accreditation/Licensing RPL Delivery Accreditation

Recommendation 4b

Prioritise processes in the areas of **NOSS, Assessments, RPL, Administration, and Quality**. Ensure that every process is **portable** to any implementer and **complete** so implementers do not need any further information. Use Phase 1 pilots to make processes feasible.

Project Management

There are two project management issues: there are not enough dedicated staff on the project, and the project’s administrative home in the NSTB may or may not be the best place for it. The staffing issue is urgent and should be addressed in Phase 1B by adding dedicated project staff, but the governance issue probably cannot be completely resolved until Phase 2. Clear expectations are crucial for all project staff and activities.

Moving forward, the project will also need to **consider and prepare for personnel changes**. While Phase 1 required planning and development, Phase 1B is the beginning of a pivot toward implementation and concrete process building. Therefore, project leadership and the SDC need to consider carefully what **knowledge and outside expertise** the project will need in its next phase. We recommend that the SDC consider including someone with implementation expertise and standards-setting expertise, for example through International Organisation for Standardisation (ISO) processes. In addition, the project needs to **prepare for turnover** of key staff or even leadership due to professional changes and retirement.

Recommendation 5

Evaluate the need for and feasibility of adding **more project-specific staff** on a limited-time basis for Phases 1B and 2.

Adjust backstopping for the project towards experience with entrepreneurship skills, implementation, and standards setting rather than project planning.

Set **clear expectations** for the project team in the upcoming Project Document, including project management requirements, knowledge, and backstopping. **Prepare for potential turnover** among key staff and leadership.

Include **MoEST, Ministry of Labour, Employment and Social Security and Ministry of Industry** actors on NVQS project leadership committees because those ministries are also related to TVET.

Project Synergies

This project has strong synergies with and opportunities for other projects, both inside SDC and with other GoN and donor-partner actors. Because the project is a system-building initiative, it engages with all of the activity related to qualifications in Nepal. Within SDC, the most important synergies are with the ENSSURE project, GESI, and TVET federalisation. Outside of the SDC, the project has strong connections to other donors' training programmes, other ministries' training programmes, and calls for a NVQS/A from development banks and the TVET Task Force Report.

Recommendation 6

Coordinate with ENSSURE so that project is aware of potential NVQF changes, **commission a study** of specific GESI needs in underserved populations, and **integrate training programmes** from donors and other ministries into the NVQS.

Conclusions

This EE agrees with the SE and SDC that the project should continue. It is a well done and needs only minor revisions. It should extend Phase 1 for one year until July of 2020 while NQF is formalised and the legal framework is put in place. If there are delays, the extension could also be fixed to the existence of the new legal framework. During that time, the project will focus on processes and capacity development to prepare the system. It does not have authority over leadership decisions or programme delivery, but that leaves it free to support the development of a sustainable system under Nepal's ownership.

Because of its system-building nature, this NVQS project takes on more risks and uncertainties than a simpler programme. Those are not a problem as long as the project is flexible and ready to apply mitigation and redirection strategies. Therefore, we recommend extending Phase 1 broadly, for example until the legal framework is available. This extension of Phase 1 is one such strategy, and will lead to a stronger final system than pushing straight into Phase 2 would allow. The project is on the right track and pursuing a worthy objective.

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List of Abbreviations

CTEVT	Council for Technical Education and Vocational Training
EE	External Evaluation
ENSSURE	Enhanced Skills for Sustainable and Rewarding Employment
GESI	Gender Equity and Social Inclusion
GoN	Government of Nepal
HR	Human Resources
ISCED	International Standard Classification of Education
MoEST	Ministry of Education, Science and Technology
NOSS	National Occupational Skill Standard
NQ	National Qualification
NQF	National Qualifications Framework
NSTB	National Skills Testing Board
NVQ	National Vocational Qualification
NVQA	National Vocational Qualifications Authority
NVQF	National Vocational Qualification Framework
NVQS	Nepal Vocational Qualification System
PET	Professional Education and Training
ProDoc	Project Document
RPL	Recognition of Prior Learning
SDC	Swiss Development Cooperation
SE	Self-Evaluation
SSC	Sector Skill Council
TITI	Training Institute for Technical Instruction
TVET	Technical Vocational Education and Training

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Mandate and Method of Study

Nepal has a three-decade history of multi-level skills testing through its National Skills Testing Board (NSTB), which is currently under the auspices of the larger Council on Technical Education and Vocational Training (CTEVT). The 2012 TVET Policy determined that a NVQA should be established, and the **NVQS project** is the elaboration and implementation of that goal. The NVQS project began in 2015 and is planned to run in three phases through 2023. The project is supported by SDC.

The NVQS project’s overall goal, as stated in the ProDoc, is to contribute to building a sustainable system of national vocational qualifications in Nepal. This is stated as follows (p.32):

“The **overall goal** of the project is to contribute to systemic changes in the technical and vocational education and training (TVET) system that will enable women and men including disadvantaged groups to get access to increased employment and self-employment and to perform at higher productivity levels. This, in turn, shall lead to higher income, enhanced livelihood and resilience, and thus combat poverty and promote inclusive growth.”

This work should lead to three primary outcomes: a Nepal Vocational Qualifications System (NVQS), National Vocational Qualifications Framework (NVQF), and National Vocational Qualifications Authority (NVQA). As planned in the ProDoc, the NVQA will grow out of Nepal’s existing NSTB. As summarised in the project’s self-evaluation report (p. 8):

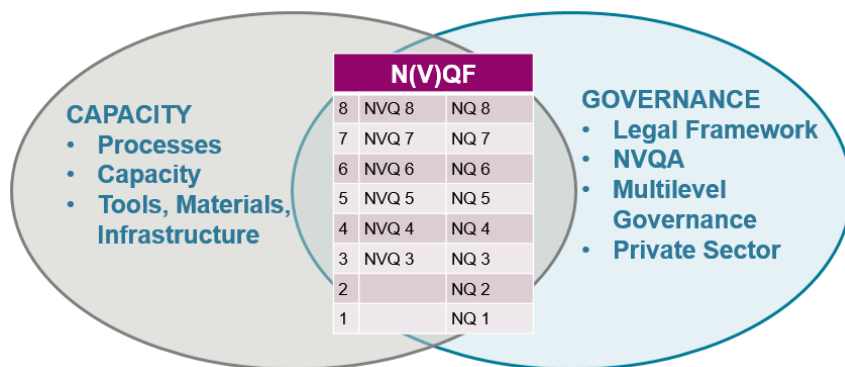
“A **National Vocational Qualifications Framework (NVQF)**: NVQFs are structures for developing, describing and systematizing the relationship between qualifications and make qualifications transparent for users, learners and potential employers so that the students know what they have to learn and the employers know what they can expect.

“A **Nepal Vocational Qualifications System (NVQS)**: NVQS includes all activities that result in the recognition of learning such as institutional arrangements, quality assurance processes, assessment and awarding processes, etc.

“A **National Vocational Qualifications Authority (NVQA)**: NVQA includes the governance and management of the system with a focus on co-ordination of policies across government ministries and ensuring adequate involvement of stakeholders.”

Visualised together, the NVQF lies at the centre of the system’s overlapping governance and capacity (Figure 1). The NVQF itself is a map of the system, which is driven by its capacity and led by system governance. Nepal is developing its NVQF and system simultaneously, meaning it has the opportunity to identify and address issues like dead ends, closed points of entry, or opacity.

Figure 1: NVQS overall, including NVQF, governance, and system capacity



Source: Depiction by authors

SDC support for the project comprises three phases. The first phase began in July 2015 and will run until July 15th, 2019. Table 1 summarises the main thrusts of each year during the first phase, along with the main goals of the subsequent phases, as stated in the ProDoc.

Table 1: Phase goals and milestones	
Phase	Main Thrust and Milestones
Phase 1 (2015-2019)	Safeguard services and quality; embark on transition roadmap towards NVQA; capacity development and gradual expansion of functions (partially on pilot basis)
Year 1	NSTB quality analysis & improvement; system design discourse; coaching; re-investment
Year 2	NSTB staff development; exposure of decision makers; 1 st awarding body; business plan
Year 3	NSTB and partner development; legal and organisational issues; IT upgrading
Year 4	NVQA organisation set-up; review; expansion of services; new infrastructure
Phase 2 (2019-2023)	Recognition, progression & permeability established within NVQF; transition to NVQA accomplished, financial mechanisms clarified; NVQA operating from new dedicated building; Full set of NVQA functions operational
Phase 3 (Planned)	Higher level TVET qualifications (equated with degrees) established

Source: ProDoc, p. 25

This external evaluation (EE) will address progress relative to goals in the first phase, and make recommendations for the design of the project in the future. It is important to note that the project is a system-building initiative, but is not the system itself. Throughout this report we will bring the focus back to supporting and developing system capacity, not driving the system or operating it on a long-term basis.

Purpose of the Assignment

The purpose of this EE is to support the design of the NVQS project's future by reflecting on the Phase 1 achievements of the NVQS, interviewing key stakeholders, and bringing a long-term perspective to bear on the project's goals and possibilities. The self-evaluation (SE), completed in May of 2018, reports extensively and thoroughly on the activities and operational achievements of the project in its first three years. We refer readers to that report for a more than competent review of work done. This review will focus especially on the effectiveness, efficiency, sustainability, relevance, and potential impact of the NVQS.

Methodology and Scope of Work

We evaluated the NVQS project in three phases: document analysis, interviews and consultations, and final analysis. In the first phase, we reviewed all relevant project documents, annual reports, and especially the SE¹. Based on that review, we formulated interview questions and initial recommendations for key stakeholders.

¹ Document list in Appendix 1

In the second phase, we discussed key questions and the initial findings with stakeholders in Nepal². During the mission, we met with dozens of important actors from the MoEST, CTEVT, project teams and committees, SSCs, the TVET Task Force, the NQF Committee, SDC, and other donor partners. The mission was immensely helpful to the EE and allowed us to answer questions, refine our recommendations according to feedback, and learn updates on key leadership decisions related to the NVQS.

In the third phase, we incorporated all of these findings and insights into this final report. More details of the work in each phase are in Table 2.

Table 2: Project phases and key activities
Phase 1: Document Analysis (September - October 2018)
Review reference documents to be familiar with the nature of the NVQS project.
Review the internal evaluation report of May 2018
Phase 2: Interviews and Consultations (November 2018)
Consult, discuss and verify findings with stakeholders of NVQS
Conduct consultation meeting with NVQS and National Skill Testing Board () professional staffs to consolidate the findings.
Review reports prepared by ETH team to link NVQS scope with the TVET federalisation context of Nepal and recommend for future option of NVQS
Sharing of preliminary findings with SDC
Sharing of findings with steering committee members and key stakeholders
Phase 3: Final Analysis and Report (November – December 2018)
Incorporate insights from Phase 2 in analysis, findings, and recommendations
Prepare final report for SDC

Source: External Evaluation TOR

Literature Review

National Qualifications Frameworks (NQFs) are a global phenomenon usually intended to drive transparency, comparability and portability of people’s qualifications (European Commission, 2018). For example, the European Qualifications Framework aimed to make national qualifications transparent among European countries and promote labour mobility and student mobility among European universities. NQFs aim to include all levels and types of formal education and training programmes, from the pre-primary to PhD levels and including both academic and vocational education types. National Vocational Qualifications Frameworks (NVQFs) are much less common, and address only the vocational and professional type of education and training (Raffe, 2015).

The distinction or lack thereof between an NQF and a national qualifications system is not clear in the literature. Some authors use the two terms almost interchangeably (i.e. Keating, 2008), and others refer to NQFs as a system or possibly multiple systems (Fernie & Pilcher, 2009; Blackmur, 2007). CEDEFOP (2010) states that the NQF is a “representation of the national qualification system” (p. 60), so the NQF is a map of the overall system including its policies, institutions, and capacity to design, deliver, and update qualifications. This definition fits the goals of Nepal’s

² Mission agenda and list of stakeholders interviewed in Appendix 2

National Vocational Qualifications System (NVQS) initiative, which covers the development of the mapping NVQF and its landscape NVQS.

Qualifications themselves have any or all of three basic purposes: human capital, cultural, or lifelong learning (CEDEFOP, 2010; Keating, 2008). The human capital function of qualifications is their position as an entry point into an occupation, as well as their role in increasing productivity through structured learning. Qualifications that serve a cultural or social reproduction purpose transmit bodies of knowledge developed over long periods of time and support broad goals like citizenship, beliefs, and understandings. Finally, the lifelong learning or pathways purpose of qualifications relies on their shared content and the connections from one qualification to the others (*ibid*). NQFs address all three functions of qualifications, and especially support the third by explicitly relating qualifications to one another through set education levels and types.

NQFs have **three main purposes**: permeability, transparency, and improving the individuals' access to further education and training or employment through portability (Yoshimoto, 2017).

Permeability is access to different levels and types of education and training from other programs, plus the opportunity to choose from multiple options (Renold & Caves, 2017). An NQF is ideally comprehensive, containing all formal programs in all levels and types of education and training (Raffe, 2013) so that there are clear ladders up to higher levels and bridges between the vocational and academic pillars. The NQF acts as a roadmap that individuals can follow to go from any starting point to any endpoint without dead ends.

The **transparency** purpose of NQFs is that they increase access to education—especially for disadvantaged groups—by clarifying the relationships among education programs, their requirements, and their levels (Blackmur, 2015). A transparent education system is less fragmented (Raffe, 2013) and more responsive to the needs of learners (Allais, 2010). The NQF can also increase international comparability and clarify the levels across types of education (Allais, 2010).

Finally, NQFs can enhance **portability** in various ways. Transparency and permeability both make portability possible, and the NQF improves recognition among education and training institutions as well as employers. This also helps companies, because if the diplomas, certificates and degrees also include the NQF level, then HR managers know at which qualification level the person is trained. This improves the conditions for mobility in the international labour market. The NQF then facilitates distributed ownership and management for different programs and types of programs, and creates clear roles for various stakeholders (Keating, 2008).

NQFs are popular, having been implemented in most countries of the world and through projects done by the OECD, World Bank, and European Union (Blackmur, 2015). However, they do have practical challenges and conceptual limitations. Allais (2014) worries that NQFs commodify education, align too closely with the labour market as opposed to “bodies of knowledge,” and have limited evidence demonstrating effectiveness. Blackmur (2015) agrees that NQFs can produce somewhat absurd nomenclature and have limitations, but states “the NQF experiment, writ large, seems to have produced benefits far from commensurate with the costs” (p. 222). He concludes that, “a less-than-perfect NQF may nevertheless be the best policy option under a variety of circumstances” (p.227).

Therefore, this evaluation will consider Nepal's NVQF and overall NVQS project not in contrast to a perfect system, but in comparison to a system that improves the status quo in Nepal's TVET system. We will focus especially on its impact in the areas of permeability, transparency, and the connection between education and employment.

NVQS Project to Date

The NVQS project can point to many accomplishments from the first phase of the project. We agree with the SE's finding that the project is overall on schedule and going well. The main challenges in Phase 1 came from the changing landscape of federalisation and the parts of NVQS that are not under the control or authority of the project. Given that the ProDoc was produced in a time of centralised government and before the TVET sector's burgeoning transformation, it makes sense that there were deviations from its stated timelines. This EE finds that the project has had a successful first phase, and can build on its challenges.

Phase 1 Achievements

The project's marquee accomplishment is developing an **NVQF** and submitting it to the MoEST, where it is being considered as part of the overall NQF. That framework is expected in January of 2019. The NVQF that was submitted is the latest of dozens of iterations, and continues to be updated in collaboration with the NQF Committee. Every stakeholder interviewed expressed strong support for the framework and the project, as well as the belief that it solves critical issues in Nepal.

Private sector engagement is a key element of the project and of the future NVQS. Two **SSCs** in the construction and hospitality sectors are underway as pilots of the SSC model. SSC members stated that the pilot phase was a learning experience for them, and that they are now much more familiar with TVET. SSC members are also eager to refine and expand the formal role of employers in the NVQS and TVET sector throughout all processes of design, programme delivery, and updating. Every interviewee also expressed that the private sector must be considered and included as leaders in the NVQS and TVET sector, and those familiar with the SSCs are eager to see them continue.

Existing and new qualification standards will need to fit into the new NVQF. The NVQS includes processes to develop new skills standards and update old ones, in partnership with employers. The NVQS project developed a new **NOSS development process** in the first phase that fits these criteria. It also developed sample occupations and began transitioning some existing NSTB standards into the new model.

Among the other accomplishments of the project in the first phase are many other processes and tools. RPL is a critical reason for developing the NVQS, and the project has begun to address the many processes included in RPL with an **RPL Handbook, RPL Toolkit, and pilots** of RPL process. There is a **GESI guideline** for NVQS, as well as a **Quality Assurance Manual**. Finally, **Model Skills Testing Facilities are being piloted** very successfully, and show great promise especially for recognising the skills of returning workers from abroad.

Phase 1 Challenges

The NVQS project can develop processes, HR, and capacity to support the implementation of the future NVQS. It cannot control and does not have authority over matters of NVQS governance. Those are the purview of Nepal's leaders and TVET-related legislation. This distinction will come up again in our recommendations for the future of the project, but in Phase 1 it contributed to three main deviations from the ProDoc: the NVQF is not yet formalised, the NVQA is not yet established, and there are some timeline delays. We find that the former two deviations are positive developments because they are not under the project's authority. When Nepal's leaders and legislative framework launch NVQF and NVQA, they will be under Nepali authority and ownership.

The project developed a proposed NVQF and submitted that proposal to the MoEST for approval. Although the ProDoc states that NVQF finalisation is a key goal for Phase 1, that goal would be less impactful than what is happening now. The MoEST is including NVQF in an overall NQF, to be approved around January 2019 and formalised in the upcoming Federal Education Act. This makes the NVQS much stronger, aligns it to general education, and makes it a product of GoN rather than a donor project. This reflects the rising profile of TVET and of the NQF idea in Nepal, and is a very positive development.

The NVQA will be the governing body of NVQS, and its probable situation has changed dramatically since the New Constitution, federalisation, and changes in the TVET Sector. It is not yet possible to say what the NVQA will be or where it will be located in GoN. These should be resolved in either the Federal Education Act, Integrated TVET Act, or both. Those are expected by the end of 2019. When the NVQA or similar functioning authority is established, it should fit into the new federalised governance structure of TVET in Nepal. It should be integrated into TVET governance, and again it should be based on decisions made by Nepal's own leaders. Again, this is likely to be better than what the ProDoc foresaw.

Finally, there were some timeline delays in Phase 1 caused by elections. These had to do with federalisation and could not be foreseen by the ProDoc. This is a natural part of the challenge of working in a dynamic context, and is not a failure on the part of the project.

Of course, there are lessons to be learned from Phase 1, structures that can be adjusted, and details that should be further fleshed out. We include these in our forward-looking recommendations in the next section, but stay focused on the strategic level.

Project Focus

The NVQS project and the NVQS itself are not the same thing, and though both overlap with the TVET sector and TVET federalisation, those are also separate. This is an important distinction for keeping the project efficient and effective, and even more so for making its outcomes sustainable and relevant. Figure 2 shows this on the simple model of NVQS scope and shows how all three elements of the future NVQS—NVQF, NVQA, and the NVQS overall—are interlinked.

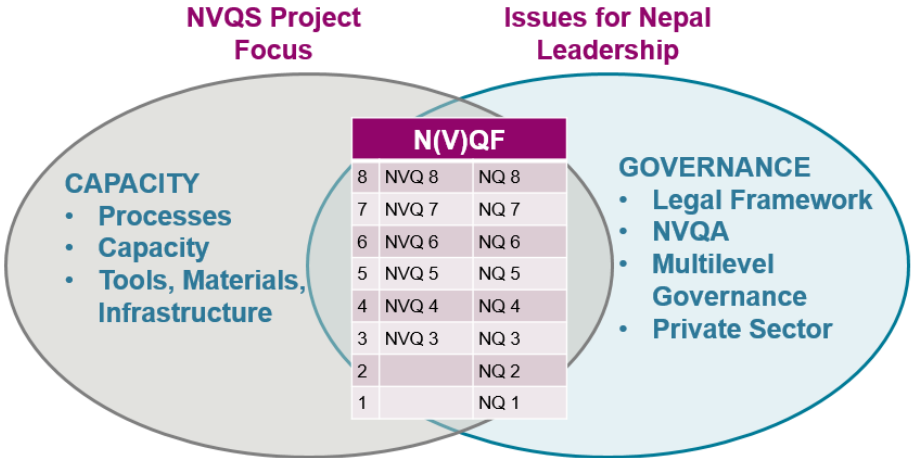
The NVQF lies at the centre of the figure, with the system's governance (in teal) on the right and its capacity as a system (in grey) on the left. NVQS governance is formalised in a legal framework, most likely the upcoming Federal Education Act and/or Integrated TVET Act. That legal framework also establishes the governing agency or agencies for NVQS as well as the TVET sector overall, how responsibilities are allocated to levels, and what the role of the private sector will be. As shown in Figure 2, these are all areas under the jurisdiction and ownership of Nepal's leaders.

In grey on the left side of the figure, however, is the area the NVQS project can support. This is the capacity that enables the future NVQS to run smoothly and effectively. These are the detailed processes of key NVQS functions like developing NOSS, converting those NOSS into assessments and RPL procedures, and maintaining quality. The project can contribute a great deal here.

The NVQF is not itself the TVET system, only the map of programmes and progression routes. However, it is central to the system overall. The NVQF defines how programmes relate to one another and how individuals can move from one programme or pathway to another. With an NVQF, it is clear how different programmes relate across pathways and how curricula within a given

programme—for example different occupations at the same TVET level—can be compared. With good governance defined by the legal framework and good processes supported by the project and implemented by the new NVQA, the NVQS can effectively serve Nepal’s TVET sector.

Figure 2: NVQS project focus in overall NVQS



Source: Depiction by authors

The project’s area of action is developing the capacity necessary to establish an NVQS, then stepping back over time during the implementation and institutionalisation phases to let NVQA take over. Formalisation, legal decisions, governance, the role of the private sector, and the final form of the NVQA itself are all leadership questions that are not under the authority of the NVQS project. However, the project can have great impact by developing NVQS capacity.

Operationally, the project should spend the one-year extension developing processes, skilled staff, tools, and materials for the future NVQS. Processes are the most important of these, because the future NVQS will entail many processes—for example RPL assessment—that are not fully fleshed out in the current TVET sector. Design processes to be portable so they can be used by the actor designated in the upcoming legal framework regardless of Ministry, agency, or governance level.

Recommendation 1

Focus the NVQS project on **building NVQS capacity**, keeping the project separate from the system to which it contributes.

To build NVQS capacity, develop processes, describe and develop necessary human resources, tools, and materials.

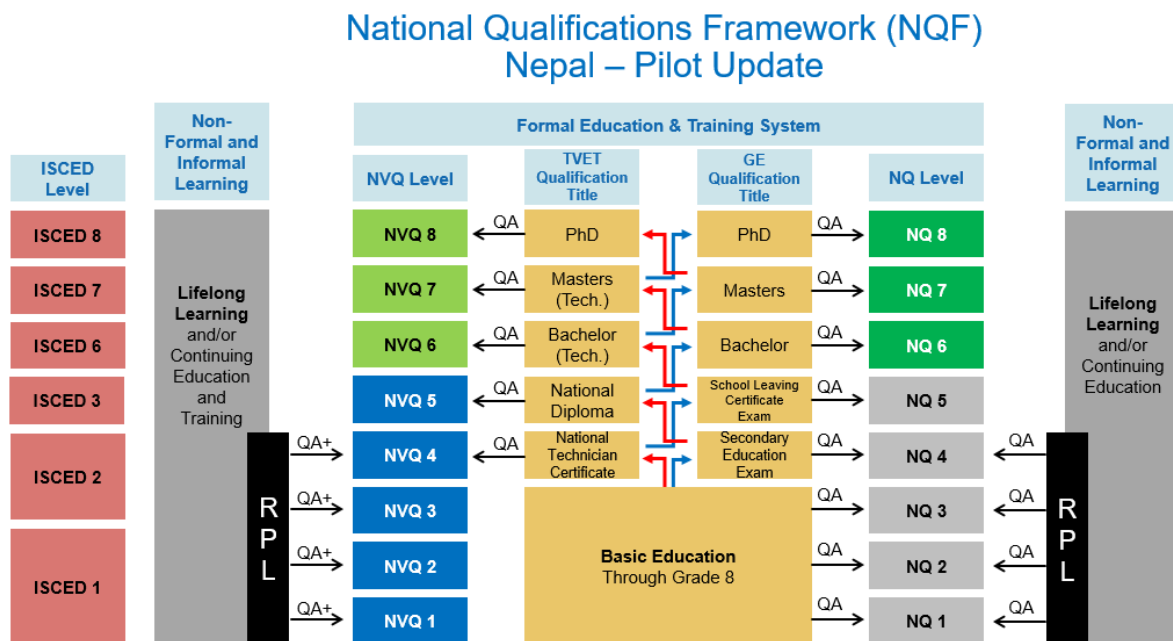
Focus first on **developing processes**. Write processes for general usage, so they can be applied by whichever ministry, agency, or governance level is assigned responsibility in the upcoming legal framework.

Finalising the NVQF

Between the NVQS project’s first phase and its next steps lies NVQF finalisation. A dedicated committee will finalise the NVQF as part of the full NQF by a dedicated committee within the next two months. While most of the framework is complete, certain elements are still under debate. This section clarifies the trade-offs and major recommendations involved in the NQF’s final details.

Figure 3 shows the most current version of the NQF that we know of. This version was presented during the fact-finding mission in November 2018. It does an excellent job of clarifying relationships among programs, showing vertical and horizontal mobility options for a fully permeable system, and using RPL as a mechanism to bring knowledge and skills from non-formal and informal learning into the formal qualification system. This is the most recent of dozens of iterations of the framework, and represents a great deal of stakeholder consensus including various government ministries, the private sector, and experts from Nepal and abroad.

Figure 3: Current NQF with ISCED levels added for reference



Source: Discussion during fact-finding mission, November 2018

There are four key areas where the model can be improved even further:

- High-level RPL
- High-level TVET
- Consideration of all ISCED levels
- Alignment of 8 NVQF levels to 8 ISCED levels, especially in levels 1-3

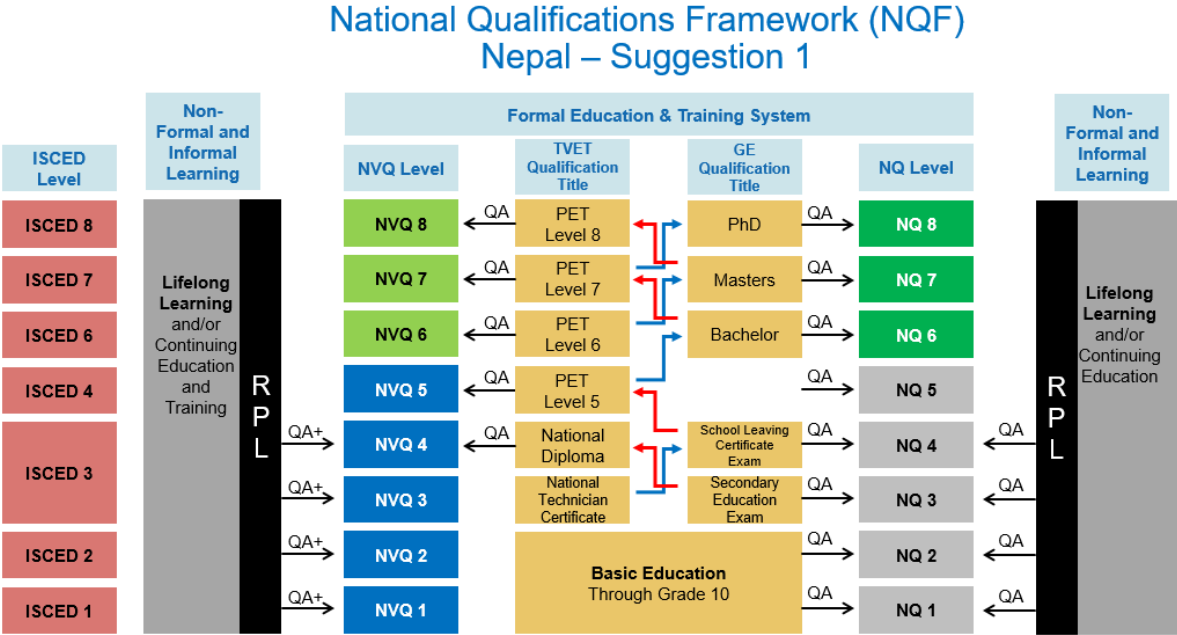
The current model shows RPL only through NVQ and NQ level 4. This is because those are the focus areas for policy and they will be the first priority for implementation. However, since the model is a theoretical representation of the system, it should show that RPL is possible at all levels. All levels are standards-based, so it is possible at least in theory to enter based on RPL even at levels five and above.

High-level TVET programmes are currently shown as technical bachelors, technical masters, and a PhD. There are two reasons to reconsider these titles. First, universities are likely to object when academic titles—especially the PhD—are used to describe TVET programmes. Second, individuals benefit more from having diverse options, and making high-level TVET into academic titles delivered by colleges and universities undermines that diversity. If the current titles remain, there

is no high-level option for practical skills training, instead only another name for university study. We will describe higher TVET by its international name, usually professional education and training (PET), but Nepal will obviously choose its own nomenclature to fit existing and aspirational programmes.

Finally, the current framework is not well aligned to standard international levels. ISCED levels (Appendix 3) were developed by UNESCO and are used internationally. ISCED translates individual countries' NQFs so they can be directly compared, which is a key goal of the Nepal NQF. Countries' education and training systems are idiosyncratic and very few match the ISCED levels exactly, but the levels and definitions in ISCED are the mechanism used to understand how countries align. ISCED is also the mechanism used to compare ASEAN countries' education frameworks, with a number of countries in the region explicitly adjusting their existing frameworks to better match ISCED³. Considering the framework now puts Nepal ahead of that trend.

Figure 4: Suggestion 1, with ISCED levels added for reference



Source: Depiction by authors

In Suggestion 1, shown in Figure 4, we have implemented high-level RPL, non-academic titles in higher TVET—called Professional Education and Training (PET)—and an incremental change toward ISCED alignment. In Suggestion 2, shown in Figure 5, we have fully aligned the NQF with ISCED. Our main revisions are on levels 1-3. Levels 1 and 2 are primary and lower secondary education. At level 3, upper secondary education, there are differentiated TVET and general education options for the first time. Levels 5-8 offer higher TVET diplomas or Professional Education and Training (PET) diplomas.

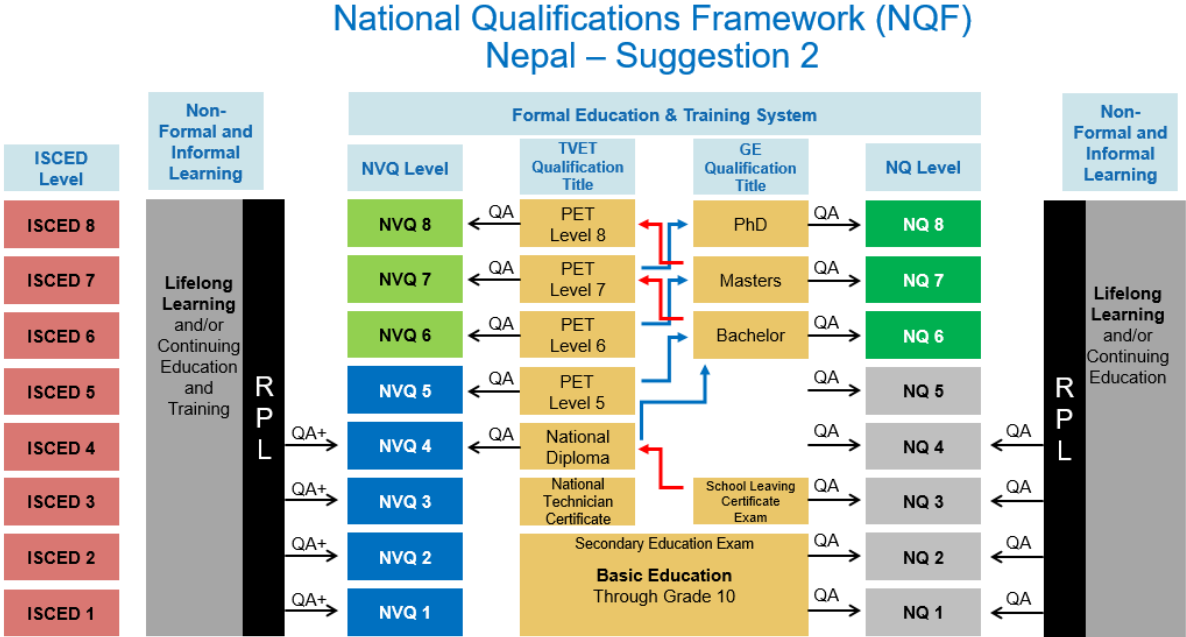
Suggestion 1 reduces some of the mid-level crowding that has ISCED levels 4 and 5 missing in the initial version. This aligns basic education to ISCED levels 1 and 2—primary and lower secondary education—and puts the upper secondary programmes at NVQF and NQF levels 3 and 4 into ISCED level 3. Lower secondary education goes until grade 10 in this model, following international norms and the recommendations of the recent TVET Task Force Report.

Level 5 is still missing, but the model is more transparent to international stakeholders and has more space for non-tertiary post-secondary options—in this case PET at level 4. Most qualifications frameworks do not have formal ISCED level 4 programmes for non-tertiary post-secondary education, so the gap is not an issue.

³ <https://www.share-asean.eu/sites/default/files/Degree-Structures-in-the-ASEAN-Region-.pdf>

The second suggestion, shown in Figure 5, fully aligns the Nepal NQF to ISCED. In this model, the Secondary Education exam is moved to the end of basic education at grade 10. This also aligns with the recommendations of the recent TVET Task Force Report. The upper-secondary qualifications at level 3 are the National Technical Certificate for TVET and the School Leaving Certificate. The National Diploma, at NVQ level 4, is a post-secondary non-tertiary programme. PET level 5 is a short-cycle tertiary programme (ISCED level 5), which is not common in Nepal for general education, so there is no corresponding programme on the general side—this is fine.

Figure 5: Suggestion 2, with ISCED levels added for reference



Source: Depiction by authors

This suggestion still enables full horizontal and vertical mobility. On the general education side, individuals with the School Leaving Certificate are eligible to start either a National Diploma or Bachelor, though additional work experience may be required for the National Diploma. Those starting in TVET with the National Technician Certificate are eligible for the National Diploma, and can be permitted to enter the Bachelor with certain additional general requirements. Since individuals with the National Diploma already have the National Technician Certificate, they are also eligible to begin a Bachelor if they have the general education requirements covered.

The full publication of the NQF will include details on progression routes and how the framework aligns to ISCED. The framework itself need not have the far-left column showing ISCED levels, that is only for illustrative purposes in this discussion.

Fully aligning to ISCED allows Nepal’s NQF to be internationally transparent and comparable. This improves mobility for individuals wishing to train, learn, or work abroad. Starting with a fully aligned framework also puts Nepal ahead of the curve, so it will not have to revise its framework later to fit ISCED as other countries in the region are already doing. Therefore, we recommend Suggestion 2 because while it is a bigger change, it aligns with the NQF’s goals, the recommendations of the TVET Task Force Report, and best practices.

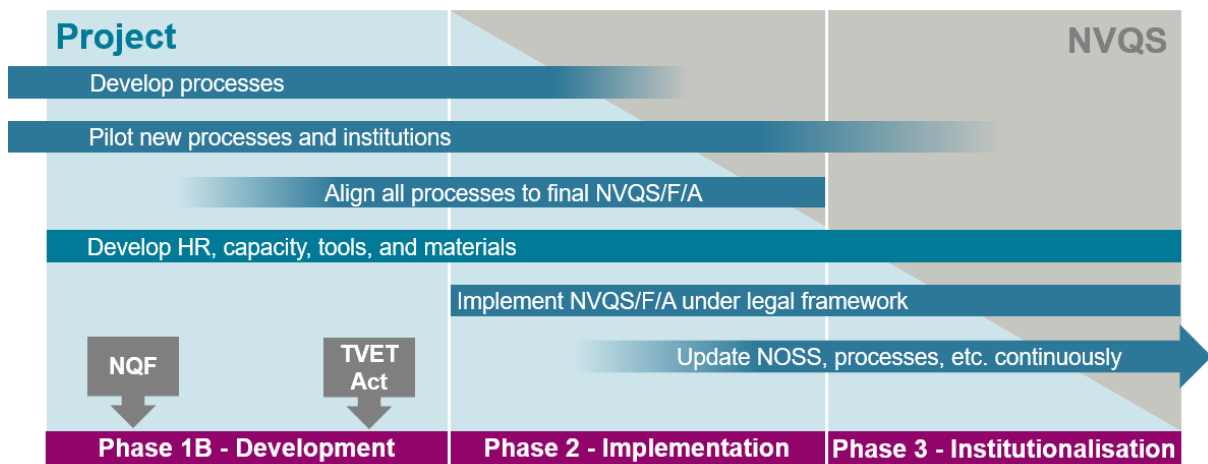
Recommendation 2

Implement the model described in Figure 5 as Suggestion 2. This aligns with Nepal’s NQF goals, the TVET Task Force Report, and international best practices.

Strategic Design

Phase 1 of the NVQS project ends in July 2019. At this point, Nepali stakeholders expect the formal NQF including NVQF and the Federal Education Act and/or Integrated TVET Act within a year of that date. Including the NVQS in a **holistic legal framework** makes it stronger than if it is standalone legislation, so it is worthwhile to wait for that to be ready. Therefore, **we recommend that Phase 1 be extended for one year** until July 2020 (or until the legal framework is available) to continue development, followed by Phase 2 implementation under the holistic framework starting in July 2020. Phase 3 will be institutionalisation. Figure 6 summarises the overall strategic plan.

Figure 6: Strategic design for developing NVQS project into a sustainable NVQS



Source: Depiction by authors

The plan has three upcoming phases: extended Development (Phase 1B), Implementation (Phase 2), and Institutionalisation (Phase 3). Over time, the project (in teal) yields to the NVQA's leadership of NVQS (in grey). NVQA will take over running, maintaining, and updating the system. This is key for sustainability—the system must be running on its own by the end of the project.

Development

During the Development phase, the main focus areas are to **continue developing and piloting new processes**, and to develop human resources and other capacity measures like tools and materials. In this time, the formal NQF and the Federal Education Act/Integrated TVET Act is expected to come out. As the legal framework falls into place, existing processes must be aligned to fit the final system. This will begin as soon as possible once the NQF is final, and will happen again when the Act or Acts defines federalisation, details on the NVQA, and possibly a formal role for the private sector. The NVQS is an opportunity to **support and formalise the role of employers and the private sector** in TVET, and the project must include those actors.

There are a number of ongoing pilot projects like the SSCs in hospitality and construction, RPL, and the Model Skills Testing Centres. These **pilots will continue**, and other pilots of new processes will begin. However, as we will discuss in the next section, pilots need formalise their lessons learned and incorporate those changes in the final version of the process.

HR- and capacity development are ongoing, but needs to be stepped up from the first phase. The main group in the NSTB working on the project is struggling to do everything necessary because NSTB staff have to focus on their day-to-day work rather than new projects (SE). Part of the project team in the second phase will be located according to the legal framework and re-defined in a Phase 2 ProDoc. In Phase 1B, according to SE the project needs more personnel (the

SE has specific recommendations). We recommend differentiating between project staff who can be financed by the donor project and administrative staff. For phase 1B it is necessary to check which resources can be made available through the donor project and other resources. These individuals will need training and development in Phase 1B, as will pilot implementers executing new processes.

The extension of Phase 1 is not a delay. Implementation cannot begin without a finished legal framework, so Phase 2 is by definition not feasible at this time. Simultaneously, implementation will go more smoothly if key processes are already designed and can be delivered to implementers with full information and calculation of resources. For this reason, it is very important that processes include not only detailed steps, but also information on necessary time, resources, personnel, collaborators, and skills.

Especially in the provinces, it will be much easier to implement new responsibilities if there is an existing guideline. NVQS implementers—again especially provinces—are likely to adjust the processes over time to fit local needs, but well-drafted best practices combined with standards set by the legal framework will help them get started. Depending on the process, these may become bylaws, standards, or manuals.

In this transition phase, the NVQS project needs to **anticipate shared ownership** among actors, even though it is not yet clear what the main actors will be in the system's final implementation. The key is that, even though we do not know what the actors will be, no process falls between institutions. Building and using shared ownership will help CTEVT and NSTB staff aware of what is happening with the NVQS so they can move quickly as institutions change.

Implementation

Phase 2, starting after legal framework is available, is the implementation phase. At this point, the legal framework should be clear and key processes should be mostly aligned. Some further process development and alignment will occur during this phase, but most processes should be ready for implementation and Phase 2 must not begin before the legal framework is in place.

NVQS implementation should be able to follow a timeline set in either the legal framework or TVET Master Plan. The project will support the NVQA in delivering NVQS based on the processes and materials developed in Phase 1 and its extension. At this point, the NVQA or a body with that function should exist under law and the NVQF will be formally regulated. The NVQS project will move to the new authorities (NVQA and/or other agencies) and support that body as it delivers all NVQS functions and processes.

In the implementation phase, HR development will be a shared issue of the project and the fledging NVQA. The project does not have enough resources to train every person responsible for executing new processes, nor would that be under its scope. However, while the NVQA will run sustainably once implemented, the project can support start-up training.

As shown in Table 3, most of the project's contributions to HR- and capacity development is done by developing processes, standards, and training materials. Those boost capacity by giving competent workers clear direction so their efforts are effective. Only a small minority of the project's capacity development energy goes to directly providing training and skills development. The NVQA will need to prepare workers in the future without the support of the project. If the project takes over HR development delivery completely, it hinders sustainability because the NVQA never gets the chance to validate processes and prepare for independent delivery.

1.

Table 3: HR- and Capacity Development in Phase 2 (and Phase 3)		
Capacity Area	NVQS Project Focus	NVQS Focus ⁴
Preparing Assessors	<ul style="list-style-type: none"> Develop assessor trainer standards, training process, & materials and calculate costs for this process Develop assessor training process & materials and calculate costs for this process Develop assessor licensing process & standards and calculate costs for this process Support pilot training and licensing processes Update according to pilots Develop future updating process 	<ul style="list-style-type: none"> Recruit assessor trainers Recruit assessors Deliver staff training with project support License according to standards & process Implement assessments with trained /licensed assessors Deliver training independently (Phase 3) Continuously update processes (Phase 3)
Preparing Assessment Centres	<ul style="list-style-type: none"> Develop assessment centre accreditation processes and criteria/standards, Develop assessment centre staff training processes if necessary Support training for pilot centre staff Update processes based on pilots Develop future updating process 	<ul style="list-style-type: none"> Prepare enough assessment centres in the regions Recruit assessment centre staff Deliver staff training with project support Implement assessments with trained staff Deliver staff training independently (Phase 3) Continuously update processes (Phase 3)
Preparing NVQA Staff	<ul style="list-style-type: none"> Develop all NVQA processes (<i>see next section for details</i>) Develop NVQA staff training processes Work closely with other NVQS staff to identify gaps and update training processes Support training for initial NVQS units staff Develop future updating process 	<ul style="list-style-type: none"> Recruit NVQA staff Deliver staff training with project support Implement NVQA with trained staff Deliver staff training independently (Phase 3) Continuously update processes (Phase 3)
Preparing NOSS Developers	<ul style="list-style-type: none"> Develop full NOSS development process Develop NOSS developer training process Support training for first-round NOSS developers Update processes based on first round Develop future updating process 	<ul style="list-style-type: none"> Recruit NOSS development staff in collaboration with SSCs Deliver staff training with project support Implement NOSS development processes with trained staff Deliver staff training independently (Phase 3) Continuously update processes (Phase 3)
Preparing SSC Members	<ul style="list-style-type: none"> Develop all relevant processes with clear role for SSC and their link to Nepal's industry associations Develop on-boarding process for SSC members Support training for first-round SSC members Develop future updating process 	<ul style="list-style-type: none"> Recruit SSC members (<i>responsibility depends on legal framework, this may fall to industry associations</i>) Deliver member training with project support Implement SSCs with trained members Deliver member training independently (Phase 3) Continuously update processes (Phase 3)
Preparing Examination Developers	<ul style="list-style-type: none"> Develop exam development process linked to NOSS Develop exam developer training process Support training for first-round exam developers Update processes based on first round Develop future updating process 	<ul style="list-style-type: none"> Recruit exam development staff Deliver staff training with project support Implement exam development processes with trained staff Deliver staff training independently (Phase 3) Continuously update processes (Phase 3)
Preparing RPL Delivery Officers	<ul style="list-style-type: none"> Develop RPL processes Develop RPL delivery officer training process Support training for pilot RPL delivery officers Update processes based on first round Develop future updating process 	<ul style="list-style-type: none"> Recruit RPL delivery staff Deliver staff training with project support Implement RPL with trained staff Deliver staff training independently (Phase 3) Continuously update processes (Phase 3)

⁴ The information in this table is somewhat schematic or generic by necessity. Tasks will be decided based on the legal framework and federalisation process. This information will have to be adapted as soon as the new legal framework is enacted. Many tasks will move to the province level.

For the project, HR development in the second phase is a five-step process:

1. Develop or refer to the relevant process(es)
2. Develop necessary staff training process(es) and calculate costs for the future
3. Support training for pilot-project or first-round staff and revise calculation of costs
4. Update all processes and trainings based on lessons learned in the pilot or first round
5. Develop future updating process for NVQA.

For the NVQA, HR development in the second phase starts with the project supporting start-up training. By the end of the third phase, NVQA is independently training staff and continuously updating processes as an independent and sustainable system. Its role is to:

1. Recruit staff for necessary positions
2. Deliver training to first-round or pilot staff according to processes, with project support
3. Implement processes with trained staff
4. Implement training processes independently for full-rollout staff (Phase 3)
5. Continuously update all processes to maintain quality and relevance (Phase 3)

Processes always include not only execution steps, but also the necessary HR quantity and capacities, time, partners, and financial resources. When project staff or future NVQS staff refer to a process, it should be clear what HR is necessary. If the skills required are not common, the project shall also develop a training process to fill gaps or bring staff up to the required level.

Training processes will be very diverse because they are aligned to need—some will be very brief and specific, while others will require more holistic training. For training processes that are more extensive, the project should consider developing a formal training programme and NOSS, along with a qualification. For certain functions like assessors, that qualification should also function as a license, without which an individual is not allowed to do the job.

By the end of the implementation period, every major process of the NVQS should be operational at least in its first round and in selected regions, and the NVQA should be established and running. The NVQS project should already be noticeably stepping back in its role so the NVQA can take over, and will do this by staying focused on processes and short-term start-up supports.

Institutionalisation

By the end of the institutionalisation phase, there should be no more need for the project. This phase will be fleshed out in detail at the end of Phase 2. NVQS processes, already implemented in Phase 2, will be scaled up to full operation. All necessary processes, capacities, and materials should be developed, with the NVQA prepared to update and maintain those processes and materials while building its own capacity through set training processes. When issues come up, the project can support NVQA in troubleshooting and findings solutions, but it will no longer be a main actor in the system. That way, the NVQS/A/F will be fully sustainable by the time the project is complete.

Recommendation 3

Extend Phase 1 of the project for one year, to July 2020 (or until the new holistic legal framework is available).

In Phase 1B: Develop all necessary processes, pilot those processes, formalise and apply lessons from pilots. Calculate the necessary resources for the future system for all processes.

Do not begin Phase 2 until the legal framework is in place.

In Phase 2: Implement NVQA/F/S, finish any remaining processes, develop additional capacity and HR. For capacity and HR development, create processes and materials that enable development, support staff training for pilots and first-run implementation, and work towards NVQA becoming self-sufficient.

In Phase 3: Institutionalise NVQA/F/S by stepping back donor partner support gradually, establishing ongoing updating processes, and handing over NVQS fully to NVQA.

Priorities and Processes

The project's focus for Phase 1B is developing processes. This section goes over priority processes and makes recommendations for process development and specific processes. In addition to its procedural steps, there are four overarching themes addressed in every process: quality, capacity development, education-employment linkage, and GESI. In addition, every process needs to include not only its primary functional steps but also the HR, time, resources, and stakeholders required.

Overarching Themes

Quality

Quality is one of the main purposes of an NVQS. Based on current federalisation discussions, we expect that there will be an overall monitoring and evaluation framework at the federal level, as well as quality assurance processes at the provincial level. Each process also needs to include specific quality assurance elements. For example, assessor training can be measured by a licensing exam at the end of the training process. At this stage, however, we cannot make any further recommendations as to who is responsible for these processes, as the new TVET Act would have to be in place.

Capacity Development

Capacity development is the focus of this project—it is system-building initiative, not a standalone programme. Every process includes the personnel required, both how many and what their specific skills must be. When those skills are uncommon, advanced, or otherwise need development, the process should specify how individuals will acquire or develop them. This should consider both the start-up phase and long-term system operation.

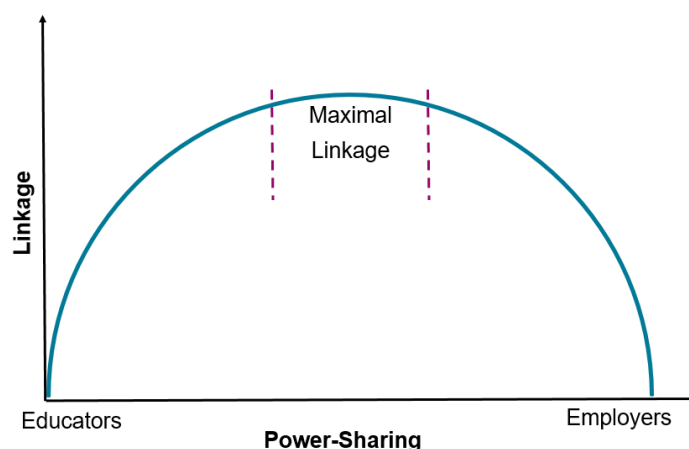
For example, assessor trainers need to understand the assessment's content, the assessment process, how to train assessors, how specific assessments fit into the overall progression in an occupational progression route, and more. Initially, assessor trainers may need to receive intensive

training from the project, but when skilled individuals advance through the system, they may only require short specific training after years of experience and training in the relevant occupation.

Education-Employment Linkage

Education-employment linkage is the degree of power sharing between actors from the education system and actors from the employment system during TVET design, application, and updating (Bolli, Caves, Renold, & Buerger, 2018). Internationally, systems with the highest linkage have the best outcomes for youth labour markets (*ibid*). Figure 7 shows how linkage works: when either education actors or employment actors have all the power—shown at the left and right extremes of the arch—linkage is low and outcomes are poor. When actors from both systems share power, linkage is highest and outcomes are improved.

Figure 7: Education-employment linkage as power sharing



Source: Bolli, Caves, Renold, & Buerger (2018)

Currently, we know that linkage in Nepal is low. Figure 8 shows the results of a small-scale survey of a group of Nepal’s key TVET leaders, taken at the CEMETS Summer Institute⁵ in 2018. The survey used the KOF Education-Employment Linkage Index to assess linkage throughout TVET design, application, and updating. The width of each pie slice shows how important the process is, with wider slices having more weight in the final index. The diameter of the coloured area shows how well Nepal’s TVET sector does at linking education to employment in that process.

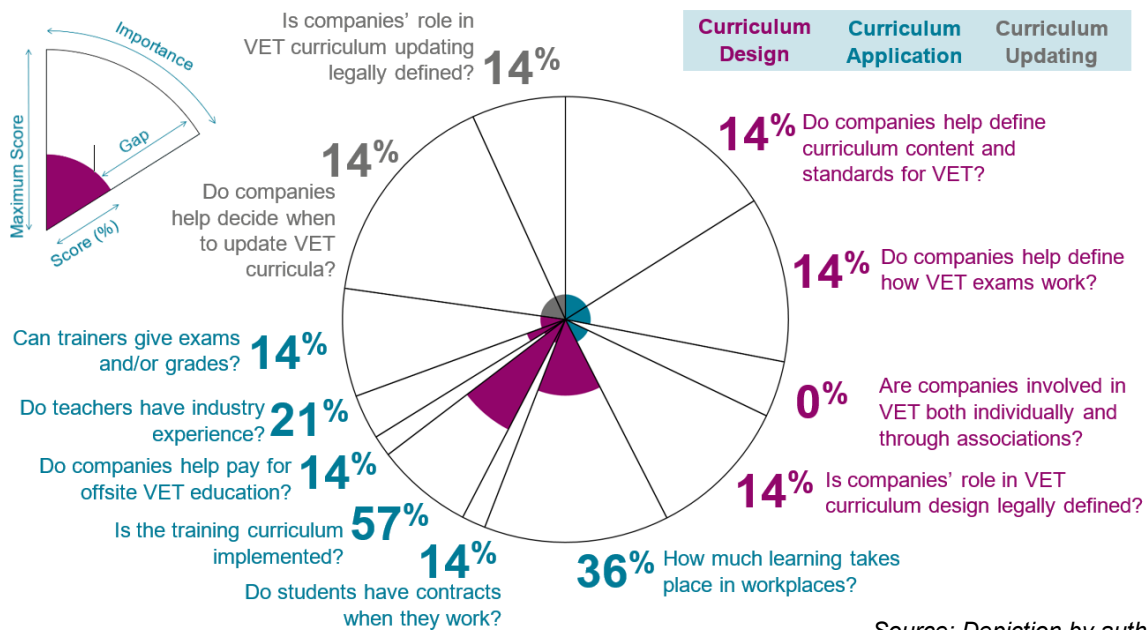
As shown in the figure, Nepal can create much stronger linkage between education and employment in the TVET sector. This and quality are already key components of the overall TVET federalisation strategy (Renold & Caves, 2017) and are referenced in the new TVET Task Force Report. In order to increase linkage, all processes in the TVET sector—including those related to NVQS—need to have a clear, formal, important role for employers.

Not only can stronger linkage increase the relevance and quality of standards, it can help employers advocate for their own needs, which enables them to participate as training providers. Work-based learning is a key component of higher linkage, and TVET programmes with greater work-based learning have better youth labour market outcomes (Bolli, Egg, & Rageth, 2017). Furthermore, when employers participate as training providers, they have the opportunity to recoup their investments in the system through returns on training investments (Mühlemann, 2016). When participation in TVET offers benefits, employers have stronger and more sustainable incentives to participate in all TVET processes (Caves & Renold, 2016). By doing so, they can influence the

⁵ <http://www.cemets.ethz.ch/education/courses.html>

programme elements that affect their ROI for training, maximising the benefits of TVET to the economy.

Figure 8: Education-employment linkage in Nepal compared to international benchmark



Source: Depiction by authors

In Nepal, the government is a major employer. This topic came up in numerous interviews whenever discussing the role of employers. Although it is usually described as the role of the private sector, employers in Nepal are frequently part of the public sector. This is an opportunity because the GoN has been clear that it is committed to TVET, NVQS, and related issues like human capital development. In interviews, GoN actors from various ministries expressed this very strongly. The GoN can support NVQS and the TVET sector overall by participating in NVQS processes as an employer, and by making commitments like preferential treatment for firms that participate in TVET when they bid for tenders.

The NOSS process has already been developed in Phase 1, but will need to be adjusted in Phase 1B. Given lessons learned from the pilot SSCs and potential changes increase the role of employers, there will be changes throughout pre-implementation. As part of those changes, there is still a vacuum in the area of employer representation. The SSCs are a start, but participants in those expressed in interviews that they would like a stronger role. The industry associations that already exist can play a bigger role, and should be enthusiastically invited to the table. One challenge for the process of increasing education-employment linkage is to define and formalise the roles of industry association actors so they can be included and also held responsible.

Every process developed by the NVQS project must consider education-employment linkage and include roles for employers, formal responsibilities, and programme design that maximises incentives to participate.

Example: Employers' Role in NOSS Development	
Employers	Government
Participate in NOSS development, either individually or through industry/employer's associations.	Convene NOSS development processes and facilitate workshops/meetings.
Contribute work cases or other examples of skills and processes certified workers should have or be able to carry out.	Convert work cases into competencies and curricula, including learning places and assessments.
Approve final curriculum	Enforce curriculum implementation
Initiate updates according to agreed-upon timelines or triggers.	Support and facilitate curriculum updating when employers indicate need.

GESI

Gender equity and social inclusion (GESI) addresses specific needs and considerations based on gender, social group, disability, and geographical situation. The NVQS is a positive step for GESI in general, because its outcomes- and standards-based nature enables individuals to earn formal qualifications through both traditional and non-traditional routes. It also enables RPL, which brings individuals back into the formal system of qualifications when they have dropped out or been pushed out. The NVQF clarifies progression routes for horizontal and vertical mobility, and shows how TVET-sector qualifications can be equivalent to general-education degrees.

As the NVQS develops through both the project and the future NVQA, it will support GESI. However, in order to do everything it can potentially do to support disadvantaged groups, the NVQS project needs to consider GESI in every process it develops. If there is something that can be done to make a process more accessible—for example by making the method flexible as long as the outcomes are achieved—then that should be considered and done. Every process will include GESI considerations.

Recommendation 4a

Consider **quality, capacity development, employers' role, and GESI** considerations, and include budget calculations in every process.

Key Processes

This section provides an overview of the key processes for the project to work on in Phase 1B. The main processes areas are NOSS, assessments, RPL, administration, and quality. Table 4 summarises the key processes within each process area. Processes should be modular and portable so they can be divided and allocated to actors however the legal framework requires. Processes must also be complete so implementers can begin as soon as possible. This means they need to include time, resource, and HR requirements as well as the functional steps of the process.

Table 4: Process areas and key processes	
Process Area	Key Processes
NOSS	NOSS Development & Maintenance Employer Access & Inclusion Programme On-Boarding
Assessments	Assessment Development & Maintenance Assessor Training Assessment Centre Piloting & Setup
RPL	RPL Tools Development RPL Delivery Piloting & Setup
Administration	Marketing & Information System Monitoring NVQA Setup
Quality	NOSS Accreditation Assessment Centre Accreditation Assessor Accreditation/Licensing RPL Delivery Accreditation

Some processes—like NOSS development—are already underway or even mostly developed. This section describes the questions each process needs to answer. Process development at the operational level will be much more detailed, but this provides a strategic overview.

We formulate processes in terms of the questions they need to answer. For example, when an individual needs RPL to access the system, who do they speak with? What is the first step? How does the assessment work? How do they access remedial programmes if there are gaps in their learning? When they pass the assessment, how do they access qualification and eventually further education and training programmes?

NOSS

The key processes related to NOSS are NOSS development and maintenance, employer access to and inclusion in the development process, and new programme on-boarding. NOSS development processes were already addressed in Phase 1, and the existing process is an excellent representation of the functional steps. For NOSS development, the main task in Phase 1B is to make the process complete so it includes all resources, time, HR, and skills necessary for completion.

Employer access into the processes related to NOSS is key; this is the employers' role in the curriculum design phase of education-employment linkage. Clarifying how employers can access and participate in NOSS development—through SSCs, industry associations, or any other method—facilitates education-employment linkage and improves programme recognition and

relevance. If existing non-formal programmes want to become formal, they also need an on-boarding route toward becoming part of new NOSS or aligning themselves to existing occupational NOSS.

There have been pilots of NOSS development processes in Phase 1, resulting in two occupations mapped out under the new process. As with all pilots done in Phase 1, the project needs to formalise learning from the pilot in Phase 1B and apply that learning to an update of the process.

Table 5: NOSS Processes (non-exhaustive)	
NOSS Development & Maintenance	
Process Questions	<ul style="list-style-type: none"> • Main process steps already clear in Phase 1 process • Who leads the process? Who else is involved? • How much time does the process take on average? • What resources (HR, financial) are required? • When should NOSS development begin relative to the planned start of the programme? • What is the process timeline relative to other processes (i.e. what needs to be complete before the process can begin, what other processes depend on this one?) • Workflow chart
Quality	<ul style="list-style-type: none"> • Make the standards relevant to industry needs by including industry partners • Make standards sufficiently advanced for their NQF levels
Capacity development	<ul style="list-style-type: none"> • NOSS developer training sub-process • NOSS workshop facilitator sub-process • SSC member training sub-process
Employer role	<ul style="list-style-type: none"> • Set role for Employer role in curriculum development, formalisation, exam design. • How is this linked to SSCs? Are any other actors involved?
GESI	<ul style="list-style-type: none"> • Set standards that can be applied in any format so that individuals can pursue the qualification through traditional education and training, RPL processes, or non-traditional education and training programmes like evening courses.
Employer Access & Inclusion	
Process Questions	<ul style="list-style-type: none"> • How do employers access the NOSS development process? • How do interested employers/associations become involved? • Who is responsible for recruiting new employers?
Quality	<ul style="list-style-type: none"> • What employers are allowed to enter the NOSS process? • What employers are required to be involved in the NOSS process?
Capacity development	<ul style="list-style-type: none"> • How are employers prepared to participate in NOSS development? • How are NVQA staff prepared to interact with employers and facilitate workshops?
GESI	<ul style="list-style-type: none"> • How does the process engage with remote employers, women-owned businesses, etc.?
Programme On-Boarding	
Process Questions	<ul style="list-style-type: none"> • How do existing programmes find the right NOSS and align themselves? • How do existing programmes initiate new NOSS development if the relevant NOSS does not yet exist? How are these requests prioritised?
Quality	<ul style="list-style-type: none"> • What are the standards for programme formalisation and accreditation? • Who is responsible for maintaining quality across all programmes?
Capacity development	<ul style="list-style-type: none"> • What skills do staff need to accredit and formalise new programmes? • How are staff trained on those skills?
Employer role	<ul style="list-style-type: none"> • What employer approval or actions are required to formalise new programmes? • How much employer involvement or approval do new programmes need?
GESI	<ul style="list-style-type: none"> • What are the considerations for remote programmes and those serving underprivileged populations?

Assessments

Under the new standards-based system, assessments are even more important than they have been under the long-standing NSTB. Key processes in this area are assessment development, assessment centre piloting and setup, and assessor training. Assessments will be developed based on the NOSS. These are the foundation of quality in the system, so this is a crucial process. Assessment centres host assessments, and have been piloted in Phase 1. In Phase 1B, the lessons from those pilots need to be incorporated back into the assessment centre setup processes.

Table 6: Assessment Processes (non-exhaustive)	
Assessment Development & Maintenance	
Process Questions	<ul style="list-style-type: none"> • How are NOSS translated into assessments? • How many staff and other resources are required?
Quality	<ul style="list-style-type: none"> • How are assessments methods compared across occupations and levels to ensure consistency and quality?
Capacity development	<ul style="list-style-type: none"> • What skills do staff need to develop assessments? • What resources can help develop assessments? (i.e. test question bank) • How are staff trained to develop assessments?
Employer role	<ul style="list-style-type: none"> • What do employers contribute to assessment development? • Do employers approve assessments? • Do assessment take place in companies?
GESI	<ul style="list-style-type: none"> • Which languages are assessments in? • How can various populations' needs be served by assessments?
Assessment Centre Piloting & Setup	
Process Questions	<ul style="list-style-type: none"> • How should authorities establish assessment centres? (i.e. checklist) • What can we learn from pilot assessment centres?
Quality	<ul style="list-style-type: none"> • How are quality and consistency assured across all assessment centres?
Capacity development	<ul style="list-style-type: none"> • What staff and other resources are required for assessment centres? • How are staff trained? By whom? With what resources?
Employer role	<ul style="list-style-type: none"> • How do employers contribute to assessment centres?
GESI	<ul style="list-style-type: none"> • Are there assessment centres that everyone can access? • Do staff speak necessary languages? • Is assessment scheduling flexible or accommodating of different schedules?
Assessor Training	
Process Questions	<ul style="list-style-type: none"> • What is the content of assessor training? • Who are assessor trainers (master trainers)? • How long does assessor training take? • How many staff and resources are required for assessor training? • How often does assessor training take place? • Do assessors need continuing education?
Quality	<ul style="list-style-type: none"> • What are the standards for assessor training? • How do we ensure training is consistent across test centres and time?
Capacity development	<ul style="list-style-type: none"> • What skills do trainers have? • How are trainers trained?
Employer role	<ul style="list-style-type: none"> • What do employers contribute? (i.e. assessors to be trained)
GESI	<ul style="list-style-type: none"> • Do trainers represent all groups?

RPL

Phase 1 developed a number of RPL materials including a handbook and toolkit. Like the NOSS process, these need to be expanded to complete processes with full information. RPL will enable individuals to access the system, so these processes are especially important for GESI. The key processes are tools development and the piloting and setup of RPL delivery.

Table 7: RPL Processes (non-exhaustive)	
RPL Tools Development	
Process Questions	<ul style="list-style-type: none"> • How are NOSS translated into RPL tools and processes (e.g. list of competences)? • How are general education standards included in RPL? • What are the priorities for RPL levels? (i.e. starting at levels 1-4) • How much time and resources does it take to develop RPL tools and processes? • How many staff are required to develop RPL tools and processes?
Quality	<ul style="list-style-type: none"> • How are quality and consistency assured across locations and occupations? • How is the appropriate level of rigor ensured?
Capacity development	<ul style="list-style-type: none"> • What skills do staff need to develop RPL procedures? • How are staff trained on those skills?
Employer role	<ul style="list-style-type: none"> • Do employers validate RPL tools and processes? • What is employers' role in designing RPL tools and processes?
GESI	<ul style="list-style-type: none"> • Are RPL tools and processes offered in multiple languages? Which ones? • How is RPL designed so that it is accessible?
RPL Delivery Piloting & Setup	
Process Questions	<ul style="list-style-type: none"> • How do individuals access RPL? Who do they talk to or where do they go? • Who is responsible for RPL delivery? • When is testing offered? How often? • How many staff are required for RPL counselling, assessment, etc.? • What happens after an exam? How is the individual counselled? • How does the individual access non-formal remedial programmes to make up deficits? • How does the individual demonstrate remediation of deficits? • How much time does each delivery sub-process require? • What resources do each delivery sub-process require?
Quality	<ul style="list-style-type: none"> • How do we ensure quality across delivery centres?
Capacity development	<ul style="list-style-type: none"> • What skills do RPL delivery staff need to have? • How are RPL staff trained for the job?
Employer role	<ul style="list-style-type: none"> • How do employers refer employees to RPL delivery? • How do employers contribute to RPL delivery? (i.e. assessment experts)
GESI	<ul style="list-style-type: none"> • How do we ensure access for all populations to RPL?

Administration

Administration includes all of the tasks likely to be under NVQA in the future. The specific body or bodies are unclear until the legal framework is in place, but the processes can already be planned. The key processes are marketing and information, new programme inclusion, management of the whole NVQS.

Table 8: Administration Processes (non-exhaustive)	
Marketing & Information	
Process Questions	<ul style="list-style-type: none"> • Who needs to know about NVQS? • What do different actors need to know about NVQS? • When do actors need to learn about NVQS? • How are updates and changes communicated? • Who is responsible for marketing and information on the national, state and local levels? • How many people are involved in marketing and information? • What resources are required for marketing and information?
Quality	<ul style="list-style-type: none"> • How does marketing and information support quality?
Capacity development	<ul style="list-style-type: none"> • What skills do marketing and information staff need? • How do staff get the skills they need?
Employer role	<ul style="list-style-type: none"> • How are employers engaged in marketing and information about NVQS?
GESI	<ul style="list-style-type: none"> • How is GESI included in this process? (i.e. languages, distribution, highlighting individuals from specific groups, etc.)
System Monitoring	
Process Questions	<ul style="list-style-type: none"> • What is the monitoring and evaluation framework? • Who is responsible for monitoring and evaluation? • How is data collected for monitoring and evaluation? • How is data used for monitoring and evaluation? • What are the key monitoring and evaluation goals? • How many staff are required for monitoring and evaluation? • How much time and resources does monitoring and evaluation require?
Quality	<ul style="list-style-type: none"> • How does monitoring and evaluation identify quality issues like cheating?
Capacity development	<ul style="list-style-type: none"> • What skills do staff need to carry out monitoring and evaluation? • How are staff trained on those skills?
Employer role	<ul style="list-style-type: none"> • What do employers contribute to monitoring and evaluation? • What can employers ask from monitoring and evaluation? • Does the monitoring and evaluation framework account for workplace learning?
GESI	<ul style="list-style-type: none"> • How does monitoring and evaluation identify equity and discrimination issues? • How does monitoring and evaluation pursue equity goals?
NVQA Setup	
Process Questions	<ul style="list-style-type: none"> • Who is responsible for NVQA staff development? • What skills and competencies will be necessary to run NVQA? • How many people are required to run NVQA in the start-up phase? • How many people are required to run NVQA in the long term? • What training requirements are there in the start-up phase? • What training requirements are there in the long term? • How much time is required? • What resources are required?
Quality	<ul style="list-style-type: none"> • How will NVQA ensure its staff are fully able to carry out their tasks?
Capacity development	<ul style="list-style-type: none"> • How will NVQA staff be trained in the start-up phase? • How will NVQA staff be trained in the long term?
Employer role	<ul style="list-style-type: none"> • What is employers' role?
GESI	<ul style="list-style-type: none"> • How is GESI included in this process?

Quality

The final process area is quality. This is both an overarching theme and a process area in itself. Its key processes are accreditation for NOSS, assessment centres, assessors, and the agencies or individuals that delivery RPL. All of those are summarised in Table 9.

Table 9: Quality Processes (non-exhaustive)	
Accreditation for NOSS, Assessment Centres, Assessors, and RPL Delivery	
Process Questions	<ul style="list-style-type: none"> • What are the accreditation standards? • Who is responsible for accreditation? • How often and under what conditions is accreditation renewed?
Quality	<ul style="list-style-type: none"> • How does accreditation ensure that every NOSS, assessment centre, assessor, and RPL delivery agency is qualified and able to carry out its duties?
Capacity development	<ul style="list-style-type: none"> • What skills do staff need to carry out accreditation? • How are staff trained on those skills?
Employer role	<ul style="list-style-type: none"> • What do employers contribute to accreditation?
GESI	<ul style="list-style-type: none"> • How does the accreditation framework encourage disadvantaged populations to participate?

Process development is the main task of the NVQS project in Phase 1B. There is a great deal of work here, but it is critical to the successful implementation of the NVQS. There are many processes other than these, and new processes will be developed in Phases 2 and 3 according to changes in governance or need. These key processes are a good start to prepare for implementation in Phase 2, though the list is not exhaustive.

Recommendation 4b

Prioritise processes in the areas of **NOSS, Assessments, RPL, Administration, and Quality**. Ensure that every process is **portable** to any implementer and **complete** so implementers do not need any further information. Use Phase 1 pilots to make processes feasible.

Project Management

The SE addresses the details of project management effectively, but this EE can add a few points from an outside perspective. There are two major issues: not enough dedicated staff on the PCU in NSTB, and instability of the project's home within TVET-sector governance. The staffing issue is urgent and should be addressed in Phase 1B, but the governance issue is a symptom of the very dynamic situation at the moment and probably cannot be completely resolved until Phase 2.

The project struggled in Phase 1 because no staff from the project or NSTB were dedicated to the project. With full daily tasks and a business-as-usual orientation, recruiting NSTB staff to work on the project did not work out well as a strategy. In Phase 1B, the project probably needs a number of dedicated individuals prepared to work on an innovative project. However, funding these staff is an issue for careful consideration. We recommend considering the necessity and feasibility of limited-time staff for Phases 1B and 2.

The upcoming legal framework is expected to include TVET restructuring along with federalisation. The roles of CTEVT and GoN ministries including the MoEST but also the Ministry of Labour and Ministry of Industry are also likely to change. In Phase 1B the project cannot reflect all of these changes. However, it can add representation from other ministries onto its leadership committees, as those ministries appear to be key players based on interviews.

Moving forward, the project will also need to consider and prepare for personnel changes. Phase 1B will require different knowledge and expert resources than it used in Phase 1. While Phase 1 required planning and development, Phase 1B is the beginning of a pivot toward implementation and entrepreneurship. We recommend that the SDC adjust backstopping to include implementation expertise and standards-setting expertise, for example through International Organisation for Standardisation (ISO) processes. Implementation will also require backstoppers with real implementation know-how through reforms or entrepreneurial experience.

As the project focuses on the areas it can control—rather than attempting to manage the entire NVQS—staff will need clear expectations from project leaders and oversight. These will be set in the development of the Phase 1B Project Document. They should include planning for team turnover and project handover to the NVQS, clear requirements for managing projects, expectations for staff knowledge and skills, and updated backstopping. In addition, the project needs to prepare for turnover of key staff or even leadership due to professional changes and retirement.

Recommendation 5

Evaluate the need for and feasibility of adding **more project-specific staff** on a limited-time basis for Phases 1B and 2.

Adjust backstopping for the project towards experience with entrepreneurship skills, implementation, and standards setting rather than project planning.

Set **clear expectations** for the project team in the upcoming Project Document, including project management requirements, knowledge, and backstopping.

Prepare for potential turnover among key staff and leadership.

Include **MoEST, Ministry of Labour, Employment and Social Security and Ministry of Industry** actors on NVQS project leadership committees because those ministries are also related to TVET.

Project Synergies

This project has strong synergies with and opportunities for other projects, both inside SDC and with other GoN and donor-partner actors. Because the project is a system-building initiative, it engages with all of the activity related to qualifications in Nepal. Within SDC, the most important synergies are with the ENSSURE project, GESI, and TVET federalisation. Outside of the SDC, the project has strong connections to other donors' training programmes, other ministries' training programmes, and calls for a NVQS/A from development banks and the TVET Task Force Report.

The ENSSURE project is establishing and testing out apprenticeship models of TVET in Nepal. Because the NVQS project is working towards standards-based and outcome-oriented education, it is a key enabler for ENSSURE. With clear standards and regulations based on outcomes, programmes like ENSSURE are free to implement workplace training. However, the NVQF is a potential risk factor for ENSSURE. If the NVQF does not allow for a 24-month upper-secondary-level apprenticeship, ENSSURE will have to dramatically reshape its programme.

GESI is a key goal for Nepal, the SDC, and this project. Because NVQS enables and greatly expands RPL, it will be a major benefit for GESI. To maximise this benefit, the project needs to know the specific needs of individual social groups, genders, and underserved geographies, as well as the intersectional needs of individuals in multiple underserved categories. A study of GESI needs related to qualifications and RPL will make it possible for the project to address issues specifically instead of the less-efficient general approach.

TVET federalisation is ongoing in Nepal, and affects this project deeply. The project fits with federalisation because it aligns to multilevel governance and the coordinated output-oriented approach in current plans. However, the project does not control federalisation or governance. When the project focusses on processes, it is both effective and appropriate to its own authority.

Other donor partners and ministries have their own projects and training programmes that relate to NVQS. The project will make sure in Phase 1B that there are clear pathways to formalisation for programmes that wish to become part of the NVQF, supporting the sustainability of these projects and programmes as well as their potential impact.

Finally, the NVQS project is the realisation of an idea that has been part of the policy conversation in Nepal for decades. Most recently, development banks and the TVET Task Force join past TVET policies and strategies in calling for an NVQS.

Recommendation 6

Coordinate with ENSSURE so that project is aware of potential NVQF changes, **commission a study** of specific GESI needs in underserved populations, and **integrate training programmes** from donors and other ministries into the NVQS.

Conclusions

This EE agrees with the SE and SDC that the project should continue. It should extend Phase 1 for one year until July of 2020 (or until the new TVET legal framework is available) while NQF is formalised and the legal framework is put in place. During that time, the project will focus on processes and capacity development to build the system. It does not have authority over leadership decisions or programme delivery, but that leaves it free to support the development of a sustainable system under Nepal's ownership.

The NQF is being decided upon by Nepal's leaders, and they should be aware of the various options and trade-offs before them. We strongly recommend aligning the system as closely as possible to the international ISCED levels in order to leave room for more programmes in the future, increase international transparency, and prevent a revision of the framework in the near future.

The NVQS project should be given at least a 1-year extension of the first development phase, followed by an implementation phase starting July 2020 and an institutionalisation phase after that. During extended development, the project will develop processes and capacity while the legal framework and NQF are set. In implementation, the project will support the new NVQA in establishing and beginning to operate the NVQS. In the institutionalisation phase, the project will offer backstopping and provide the last remaining system-building supports before the system can run on its own. Throughout implementation and institutionalisation, the project will continuously step back its role as the NVQA steps in.

During Phase 1B, the project needs to get all of its processes ready to go. When implementation starts, it should be ready to hand fully articulated and packaged processes off to the new bodies in charge, and those processes should be implementation-ready. Key processes that must be developed are NOSS development, assessments, RPL, administration, and quality. All of these processes must consider quality, capacity development, education-employment linkage, and GESI.

There will be natural adjustments to project management when it moves under a new NVQS or similar body through the new legal framework. For Phase 1B, the intermediary ProDoc can make a few small changes that will help the project be more effective. Most importantly, the project needs dedicated staff who can work full-time on the project. Non-education ministries like the Ministry of Labour and the Ministry of Industry should also be involved in project leadership.

This project has many synergies with Nepal's TVET goals, the objectives of the SDC, and other donors' activities. Because it is a system-building project, it creates opportunities for many actors to engage and for the system to develop on its own. As the project fades out over Phases 2 and 3 let NVQS stand on its own, the resultant system will become a sustainable part of Nepal's self-development.

Because of its system-building nature, this project takes on more risks and uncertainties than a simpler programme. Those are not a problem as long as the project is flexible and ready to apply mitigation and redirection strategies. This extension of Phase 1 is one such strategy, and will lead to a stronger final system than pushing straight into Phase 2 would allow. The project is on the right track and pursuing a worthy objective.

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Documents

- Self-Evaluation Report, June 2018; Main document and all Annexes
- NVQS Project Document
- NVQS Annual Project Reports 2015-16, 2016-17, and 2017-18
- PSC Minutes (#1-#6)
- Lessons learnt at NVQS in first year
- NVQS Guidelines/Manuals
 - Quality Assurance Manual
 - HRD Plan
 - NVQS Employee Manual
 - RPL Handbook
 - RPL Toolkit
 - Communication Guideline
 - GESI Guideline
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 - 2015 Constitution
 - 2012 TVET Policy
- SDC Policy/Guidelines
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 - Geographic Targeting
 - FFA Guideline 2017
 - Simplified FFA Sheet
- Reports of external experts on NVQS System Development:
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 - Maurer, (2016). International National Vocational Qualifications Systems"
 - Gerber (2016). "Road map for transition from to a NVQA"
 - Event Report (2016). "National interactive seminar"
- Studies and visit reports
 - Report: National Occupational Skill Standards
 - Renold & Caves (2017). The New Constitution and its Impact on TVET Governance in Nepal: A report in support of developing understanding and finding the way forward for federalizing the TVET sector in Nepal. *KOF Studies* No. 89
 - Renold, Bolli, & Caves (2018). Constitutional Reform and its Impact on TVET Governance in Nepal: Second report in support of developing understanding and finding the way forward for federalising the TVET sector in Nepal. *KOF Studies* No. 114.
 - Miehlabradt, Riggs, & SEEP (2012). "Monitoring and results measurement in value chain development: 10 lessons from experience" Technical note.
 - Raaflaub (2017). "Draft of NVQF Guideline"
 - ILO Allais (2010). "The implementation and impact of national qualifications frameworks: Report of a study in 16 countries"
 - Horn (2018). "Nepal Vocational Qualifications System: Consequences of the Self-Evaluation Process and the Federalization"
 - Study Tour: towards establishing NVQS Project
- Swiss Cooperation Strategies for Nepal
 - Swiss Cooperation Strategy for Nepal (2013-2017)
 - Swiss Cooperation Strategy Nepal (2018-2021)
- National Skills Test Centre Accreditation Guide, Main document and all Annexes

Appendix 2: Agenda of Study Visit to Nepal

Date	Time	Activities	Location
11.11.2018		Arrival	Hotel
	16:00-17:00	Preparation with SDC	
12.11.2018	9:00-10:30	Meeting with SDC	SDC
	11:30-12:00	Briefing of the review programme to CTEVT Member Secretary, NVQS Team Leader and Director	CTEVT
	12:00-14:30	Inputs/insights from and NVQS key staffs including Director and Team Leader	NVQS
	15:00-16:30	Inputs/insights/way forward from the CTEVT directors	NVQS
13.11.2018	9:00-12:00	Meeting with Sector Skills Committee and Industry Associations	Alfa House
	13:00-14:30	Discussion with NVQS TL, Director , and key staffs to explore more on the future outlook of NVQS	NVQS
	15:00-16:30	Meeting with the VC CTEVT and the members of the Project Advisory Committee	CTEVT
14.11.2018	10:00-12:00	Inputs/insights/future outlook from the ministry of Education and Science and Technology and with PSC members	MoEST
	14:00-16:00	Meeting with development partners	SDC
15.11.2018	10:00-13:00	Meeting with Board Members	Airport Hotel
	15:00-17:00	Meeting with TVET reform task team members	Airport Hotel
16.11.2018	9:30-12:00	Reflection of the mission and discussion on outlook of NVQS in the next phase with SDC, SCN Country Director, NVQS Team Leader, Director	SDC
	14:00-16:00	Debriefing at SDC	SDC

Appendix 3: ISCED Levels

ISCED 2011 Level		Description
0	Early childhood Education (01 Early childhood educational development)	Education designed to support early development in preparation for participation in school and society. Programmes designed for children below the age of 3.
	Early childhood Education (02 Pre-primary education)	Education designed to support early development in preparation for participation in school and society. Programmes designed for children from age 3 to the start of primary education.
1	Primary education	Programmes typically designed to provide students with fundamental skills in reading, writing and mathematics and to establish a solid foundation for learning.
2	Lower secondary education	First stage of secondary education building on primary education, typically with a more subject-oriented curriculum.
3	Upper secondary education	Second/final stage of secondary education preparing for tertiary education and/or providing skills relevant to employment. Usually with an increased range of subject options and streams.
4	Post-secondary non-tertiary education	Programmes providing learning experiences that build on secondary education and prepare for labour market entry and/or tertiary education. The content is broader than secondary but not as complex as tertiary education.
5	Short-cycle tertiary education	Short first tertiary programmes that are typically practically-based, occupationally-specific and prepare for labour market entry. These programmes may also provide a pathway to other tertiary programmes.
6	Bachelor or equivalent	Programmes designed to provide intermediate academic and/or professional knowledge, skills and competencies leading to a first tertiary degree or equivalent qualification.
7	Master or equivalent	Programmes designed to provide advanced academic and/or professional knowledge, skills and competencies leading to a second tertiary degree or equivalent qualification.
8	Doctoral or equivalent	Programmes designed primarily to lead to an advanced research qualification, usually concluding with the submission and defense of a substantive dissertation of publishable quality based on original research.