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Original Research

**Revitalising Jiri Technical School in a Dramatically Changed Context:
Governance, Management and Employability**

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Abstract

This paper examines two assumption: First, whether inadequate practical training, including much shortened apprenticeship training, has negatively affected the employability and incomes of graduates of Technical and Vocational Education and Training (TVET) institutions in Nepal, and the second, whether it is good institutional management and governance that provide the systems for quality training and positive labour market outcomes. Tracer studies and an institutional assessment of Jiri Technical School (JTS) confirm the first assumption. The review of select literature on institution building and the benchmarking of JTS' operative practices against those of high performing educational institutions (in India) confirm the second assumption. It is argued that poor management and governance of TVET institutions drifts the mission of Technical Schools away from their initial socio-economic mandate: the provision of skilled human resource and access to qualification opportunities to the youth having the aptitudes for such an education. Social rather than labour market demand with corresponding politics is one major force for such deviation. To revitalise the JTS, it is proposed to bank on the federalisation of the TVET governance system to professionalise Board, Management and teachers for enhanced labour market outcomes in closer cooperation between actors from the education and employment systems.

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Introduction

According to the Central Bureau of Statistics ([CBS], 2019), more than nine hundred thousand Nepalese were looking for a job in Nepal and abroad in 2017/18. Among them, 38.1 percent were 15 - 24 years old and another 31.1 percent 25 – 34 years old. The number of Nepal’s working population is 20.7 million. The average earning per month of those who had a job was NRs 17,809. Women’s earnings are much less, i.e. NRs 5,834 per month (CBS, 2019).

Technical and Vocational Education and Training (TVET) is regarded as a potential boosting factor for a self-sufficient economy. National qualification frameworks and labor market orientation (as, for example, in “dual” systems in which employers and training institutes work in close collaboration) are considered potentially effective factors for performing TVET systems.

After the introduction of a new constitution, in order to strengthen the technical education system, the Government of Nepal has been working to update TVET policies. The current efforts are : (a) TVET should develop quality human capital to support economic development; (b) the creation of pathways for the further development of TVET graduates; (c) enhancing good governance for efficiency, effectiveness, equity and linkages to the employment system; and (d) systems development at federal, provincial, and local level in terms of policies, clarifying functions and funding (Renold & Caves, 2017). Literature shows that there are several other challenges to be resolved too, such as (a) the TVET sub-sector gets only about two percent of national budget; (b) TVET needs to be under one sector rather than spread over many ministries and offices; (c) the qualification framework covering the total education system is to be finalized and implemented; (d) outdated, more than 15 years old curricula; (e) weak TVET information and management systems; and (f) capacity development at school level to ensure the quality of learning that satisfies labor market demand and employers, students, teachers, parents and the government

(Ministry of Education, Science & Technology [MoEST], 2017; Renold & Caves, 2017).

The Jiri Technical School (JTS) is used here as a case to benchmark its outcomes, governance, management, and training practices against those of a high performing institution. JTS was established in 1984 as a rural Technical School to produce skilled manpower in health, agriculture and rural construction in a joint venture of the governments of Nepal and Switzerland. By 2020, 3,508 students graduated from long term courses (Technical School Leaving Certificate TSLC and Diploma), and 11,220 trainees completed short term courses. Currently, 536 students are studying. At initial stage, the intake qualification was grade 7 passed and the duration of the on-the job or apprenticeship training was one year after a three years' practice oriented course at the school. All students had residential facilities with partial scholarship and plenty of learning opportunities in school workshops, farms, workplace development projects and the surrounding community.

JTS as a “representative” of the rural (public) TVET system did have to cope with the outfall of a massive earthquake in 2015 which destroyed most of its infrastructure. But the organization kept going, venturing into mostly “academically” advanced new diploma programs in the areas of agriculture and civil engineering.

If one thing remained pretty much the same in the TVET sector over the last 20 – 30 years it has been “system’s expansion”, facilitated by a steady flow of development funding and sector liberalization through the affiliation of large numbers of (private) training providers. Did all this enhance the performance of the TVET system and its institutions? Have steering decisions - such as the expansion of diploma programs in Technical Schools - been taken based on results and labor market demand? Have the governance and management systems, their “institutionality” been fit and robust enough to ascertain the expected outcomes and recognition of TVET in society and the economy? Are there lessons to be learnt from the JTS for the (rural) TVET system more generally?

These are some of the main questions this paper raises and attempts to investigate. They are derived from practices and “realities” we have been experiencing, observing and analysing in Nepal and the region more broadly. It is hoped that the (partial) answers we are attempting to give will be useful to TVET practices in Nepal.

Problem Statement

The assumption underlying the provision of (costly) TVET is that it provides society and economy much needed skilled manpower – and the country’s youth access to decent jobs, better incomes and/or continuing education opportunities. This function is essential to overcome a strong “second choice syndrome” among Nepali youth and their parents. Following primary and secondary education, only a small proportion of an age cohort can aspire for higher academic education. The majority needs to find its way into the job market, and TVET is expected to effectively facilitate this transition. The comparative strength of a TVET institution – and the rationale for its high (unit) costs - is that it provides the attitudes, practical skills and knowledge that employers seek (or the challenges of an independent income generating activity / life of an entrepreneur demands). Employability of a Technical School graduate is therefore a critical result a TVET institution must achieve to live up to its mandate. Practical training, real world of work experience and knowledge and attitudes that are useful in this world are the type of educational experiences that an institution such as JTS needs to provide on-site and in cooperative (“dual”) arrangements with employers. The fact that these job-related components and capacities have been reduced and weakened under changing Council for Technical Education and Vocational Training (CTEVT) policies and prevailing operative practices in TVET institutions over the last years raises one key question mainly: Have these changes impacted negatively on the employability and labor market outcomes of JTS¹ graduates? It is from this question that we derive the first research hypotheses of our analysis: *Practical training, including apprenticeship training, has been weakened to the point where graduates have difficulties in finding jobs or earn an adequate income through self-employment.*

Our second research / working hypotheses is related with the first one: *Only efficient and effective governance and management can assure the quality of training and hence the employability of Technical School graduates.* The background to this hypothesis is the rich experience and literature existing on the building of educational institutions (Shah, 1999) and lessons learnt from many a development project with an aim to enhance the performance and introduce innovations in technical training institutions by providing various types of inputs (such as staff training, equipment, facilitation services for industry links etc.). Rao et al. (1999) have shown – for a large Swiss Agency for Development and Cooperation (SDC)/World Bank funded project in

India supporting almost 40 technical education institutions – what many a TVET development professional has observed in Nepal and elsewhere: Better governance and management of an institution provide for much better development results, and the genuine institutionalization of innovations such as institute – industry linkages². Strategically steering and operationally managing TVET institutions at the interface of the worlds of education and work is challenging under any circumstances – but much more so in a context like (rural) Nepal over the last two to three decades³.

Methodology

A review of practice-oriented literature focused on the importance of “institutions” in development, on institution building and innovation in (technical) education, governance and management of organizations, on research methodologies and on publicly available material on TVET in Nepal, including two tracer studies (CTEVT, 2016; La Palma, 2015).

Shah’s (adapted) institution building model in Annex 1 and criteria of operative practices in high performing (educational) institutions were used as a conceptual framework and benchmark for an analysis of the JTS. This was done during a visit in Jiri by a participatory strength, weaknesses, opportunities and threats (SWOT) analysis, site observations, and in-depth interviews and group discussions as detailed below.

The sampling design for the interviews considered five different perspectives: (1) From Board members and community leaders (2) management (3) teachers (4) students and alumni and (5) employers⁴. The latter three represented views from three trades and TSLC as well as Diploma programs. The administrative data was applied for the quantitative estimation and analysis of the JTS graduates. As Gray (2009) pointed out that the purpose of individual interview was to attain highly personalized data about a person’s knowledge, values, preferences and attitudes regarding JTS operation and training delivered. But the purpose of group interview or interaction was to make data rich by stimulating respondents and elaborating concerns over and above individual responses (Fontana & Frey, 1994).

Face to face interviews were undertaken with regular students, Board members, local political leaders, the Principal, teachers, and management staff of the school. Group interviews were conducted with regular students in classrooms of all the

programs such as Agriculture Diploma, Agriculture TSLC, Health TSLC, and Civil Construction TSLC. Altogether, 160 students were interviewed and their outputs documented. While individual interviews - especially with Board members and community leaders - yielded a variety of personal views and perspectives on various criteria of JTS’ operational practices and performance over a period of 30 years, group discussions added rich and nuanced information and understandings on issues and concerns of a more common nature (Fontana & Frey, 1994).

Telephone interviews were done with graduates of 2015 to 2017. Details of the same are presented in the following table.

Table 1

Graduates Interviewed

Trade/ Programs	Number of Graduates Interviewed
Agriculture Diploma 2017	6
Agriculture TSLC 2015	6
Health TSLC 2016	3
Health TSLC 2015	3
Civil TSLC 2016	3
Civil TSLC 2015	3
Total	24

Similarly, telephone interviews were conducted with 3 health, 6 agriculture, and 1 civil construction employers. Four of them represented a government organization, three an NGO and three again private sector companies.

Five Key Messages

Basic information on alumni is hard to come by, not to mention information on the employability and employment status of graduates. Our findings on the outcomes of programs under CTEVT - including JTS - draw on two tracer studies (CTEVT, 2016; La Palma, 2015) and on interviews and focus group discussions with trainees, alumni and employers.

Many of our observations following here below on governance, program developments in Technical Schools, trainee selection, growth of self-employment opportunities etc. need to be interpreted on the background of the wide and deep developments that have taken place in Nepal over the last two to three decades in the political, demographic and socio-economic domains. Changes in the education sector over that period also occurred due to a growing politicization of education policies, bureaucratization and quantitative marketing of TVET provision.

Against this backdrop, we summarize the findings of our research for the purpose of this paper in five messages, each one complemented with a brief discussion.

1. The employment situation of graduates of Diploma and TSCL programmes under CTEVT is worrying and not what one must expect from a TVET programme

The national CTEVT/Acin (2016) survey analysed graduates of the academic year 2013 from eight TSLC and eight Diploma programs. From among the employers interviewed in that survey, 2.86% only were from the agriculture and construction sectors, none from manufacturing (hence, almost 80% were from the health and social service sectors). Both public and private (affiliated) training institutions were included in the sample. Between six and up to twenty months after training completion⁵, 49% of graduates were employed (51% of Diploma and 47% of TSLC holders). In Health, ANM's were found to increasingly be replaced by staff nurses. Income levels of the employed were generally found to be good. Self-employment in agriculture yielded the best incomes. Both alumni and employers reported "inadequate practical opportunities in the training institutions, especially in private institutions". Additional "workplace training packages", industrial attachments, linkages with employers and the job-market more generally, "functional placement and counselling", the revision of curricula and their effective implementation and monitoring (especially with respect to

its practical parts), enhanced workshops, adequate equipment and tools are among the main observations and recommendations of the study.

Discussion: *Employment rates below 50% six to twenty months after graduation are highly problematic for a TVET program; quantitative system's expansion does not seem to pay off. And TSLC trainees/holders seem to risk of being crowded out by Diploma students/holders (clearly the ANMs by staff nurses or Health Assistants), because of the on-going degradation of practical training capacities in Technical Schools and their programs (from much shortened apprenticeship and on-the-job training arrangements to dysfunctional workshops; the absence of essential tools and equipment to practically not well prepared and guided instructors). Centrally administered trainees' selection (are Technical Schools getting "the right trainees"?) and the growth of Diploma programs increasingly dominating institutional training cultures are added factors impacting on the Technical Schools' abilities to achieve the employability of their graduates. The low performance of private training providers raises questions as to the relevance and reliability of the affiliation system.*

2. JTS graduates of TSLC programs seem to be doing better. But the practical parts of the trainings have been heavily curtailed

The JTS tracer study (La Palma, 2015) is differently designed compared with the CTEVT /Acin (2016) study. A sample of 512 (TSLC only) graduates was drawn from almost 3000 alumni of the school's first 29 batches. Although the initially strong local/regional focus ("training the youth below SLC of five districts surrounding Jiri and training them for job opportunities in these districts") softened over the years, not least due to centrally administered trainees' selection, the majority of the students (and even more so the alumni included in the study sample) continue to come from and work in today's Bagmati Province and Gandaki Province in western Nepal. Another major difference of the JTS tracer study compared with the CTEVT / Acin (2016) study is that it did not cover employers – a dimension we attempted to address at least partly with employers' interviews in 2019 (see also chapter 3, Methodology). The main findings and recommendations then with relation to our first research hypothesis are the following: 87.9 % of the TSLC graduates surveyed were employed, earning between NRs 15,000 and 20,000 per month (86% of them in the public sector, which is attributable largely to the specific service orientation of the trades taught). 96% of

the TSLC-holders employed are satisfied with their job. The highest unemployment rates were found in agriculture. The few (23) graduates in self-employment were engaged in the construction industry, which was also paying the highest salaries according to this study. The relevance of the practical training was analyzed from several perspectives, with a focus on employers and trainees and alumni. In our telephone interviews, employers as well as alumni reported that graduates could not reach mastery levels in skills due to inadequate practical experience and training. On the other hand, OJT (on-the-job-training) programs were highly rated and found to be useful in preparing graduates for employment. Among the highest ranked suggestions to improve the school's programs are curriculum and workshop upgradation and the improvement of practical training. The study author also underlines the importance of an alumni data base – and regular tracing studies (see also Annex 2).

Following the earthquake in 2015, overall institutional management - including student counselling and alumni tracing – suffered severely at JTS. Results from the authors' telephone interviews conducted in 2019 remained remarkable, however: of 24 alumni who graduated between 2015 and 2017, 17 were found in paid employment, 3 in self-employment and 2 were still searching for a job (2 could not be contacted).

Discussion: *That JTS would perform better with respect to the employability of its alumni who graduated between 1988 and 2014 can – we assume - be attributed to its public sector status and funding (which is in line with the findings of the CTEVT / Acin (2016) study) and its exclusive focus on TSLC programs over a long period of time. Organizational analysis literature offers an additional key factor that can help to explain the “model” character of an institution: Tacit knowledge (e.g. values, commitments, processes, “culture”)⁶. Such knowledge is difficult to maintain over the long-run and hard to transfer across institutions compared to explicit knowledge (which is easily observable and can be verbalized and documented). A “culture of being practical”, of working on practical problems and tasks close to the world of work, is perhaps the most appropriate description of the “tacit expertise” JTS was successful to develop and cherish for a substantial period of time. Working with employers as on-the-job trainee or as apprentice was very much part of this “culture”.*

One version of what is called on-the-job training (OJT) in the JTS tracer study was operated as a full year “apprenticeship training” (APT) during the school’s initial years for all the three trades. However, the APT was gradually reduced from one year to 6 months OJTs for the TSLC in agriculture and in construction and from 18 months APT to a 3 months OJT for the TSLC in Health (ANM). Diploma students have a 3 months OJT (agriculture) or project work in Jiri only (construction). Block type of OJTs (internships with employers) conducted during the first, school-based years of a program have also been reduced over time, for ANMs, for example. The tracer study on JTS does not differentiate its findings over time; in other words, it does not allow us to draw firm conclusions on the extent cutting OJTs and APTs has negatively impacted on the (later years) graduates’ employability.

The findings of the CTEVT / Acin (2016) and JTS (La Palma, 2015) tracer studies have subsequently been complemented by an institutional assessment of the Jiri Technical School (para 4.3 to 4.5), including alumni and employers’ interviews.

3. The indications that the TVET system does not prepare trainees for the world of work are strong, from all the sources analysed. Employers, alumni, trainees and staff unanimously state that practical training is inadequate. They confirm our first research hypothesis.

The messages provided by the tracer studies referred to above were confirmed in the interviews and focus group discussions the authors of this paper conducted with both Diploma and TSLC-course trainees, staff and local leaders (including the heads of Government hospital and farm) during an institutional assessment conducted of JTS in Jiri in April 2019, but also in follow-up interviews with Diploma and TSLC alumni and (construction) employers (see also chapter 3, Methodology). There is a high degree of unanimity and urgency across all sources with which the weaknesses of practical training and the limitations of real world-of-work experiences were described. Additional elements from the JTS assessment that are worth to be added here are: Self-employment skills and entrepreneurship are missed by trainees who show a growing interest – or are forced into - self-employment for lack of alternatives. Observations on the school-site showed run-down or abandoned workshops. And JTS still suffers from the aftermath of the 2015 earthquake, with continued shortage of teaching and accommodation facilities. Visits and interviews with near-by employers

(potentially) offering hands-on training opportunities and with community leaders provided indications that linkages and cooperation with these stakeholders are weak and not systematic.

Discussion: *Running TVET programs for employable qualifications in a Technical School and in collaboration with stakeholders from the world of work poses high demands on an institutional management. Experience and literature (Rao et al., 1999; Shah, 1999) demonstrate that training institutions that excel in the provision of manpower with employable skills and client-oriented services (enterprises, farmers, the community) are well managed and governed. What then are their operational practices, and how do those compare with JTS?*

4. JTS' operating practices today are far off the benchmark of a high performing educational institution. And yet, it has strongly been expanding its Diploma programmes

Annex 2 provides an overview covering seven performance areas that are critical for an (higher) educational institution's performance. The differences between the characteristics of a "high performer" and JTS are striking and probably valid for most of the public sector Technical Schools in Nepal today. The benchmark is justified not least due to JTS's own vision to be a "center of excellence". Some of the most salient features of the overview in Annex 2 are:

- A high level of centralization in the management (and governance) of Technical Schools – which seems to have grown over time;
- Staff policies leaving little or no space to select, promote, incentivize, develop, least so by the local management;
- There does not seem to be a transparent rational, strategy and (participatory) process for the (development of the) current and future portfolio of products (programs) and services (to the community, for example). Evidence from the labor market (employability) does not seem to be a driver of program development;
- Lack of clarity regarding roles, functions, responsibilities, processes etc. at several levels, including the strategic steering level (School Management Committee, SMC);
- Heavily damaged, poorly maintained and managed infrastructure;

master plan for re-construction not based on future program strategy;

- Unclear funding policies, partly due to on-going federalization processes. Local earnings deliverable to the central treasury/CTEVT;
- Management and operation: Not geared towards (labor market) results and cooperation with employers, including OJT and APT partners; oriented towards targets of central Government; unclear interests driving Diploma program expansion.

Discussion: *The inadequacy of practical training, resulting in lowered levels of training quality overall and a degradation of the employability of graduates, must be understood as a result of the school's poor operative performance and practices – which is again linked to the institution's management and governance system (our second working hypothesis).*

On-site observations demonstrated a changing organizational and training culture and practices. This is due substantially to the introduction of 3-year Diploma programs for SLC passed students in JTS (in agriculture in 2014 and in construction in 2019). Diploma programs have, by design, a practical content of 20% only, while TSCL programs are expected to have a practical content of 80%. Expansion is meant to continue with agro-forestry and nursing programs at Diploma and a surveying program at TSLC levels according to a draft 5-year plan. This would bring the total student population to over 500, with the share of TSLC trainees falling below 30%. Hence, the drive for quantitative expansion, “academization” of the program portfolio and crowding out of TSLC graduates referred to under 4.1 can also be observed in JTS. Strong incentives seem at work to make the institution a “Diploma campus or Polytechnic”. While the TVET discourse in Nepal is unanimous that the sector should be driven largely by labor market needs and demand, the question is whether it has not been social demand and “politics” driving student intake and programming in Technical Schools with the strong politization of the education sector starting in the 1990s. This raises the question on how Technical Schools have been or should be governed, who and how their orientation should be determined – especially under the emerging federalization scenario of Nepal. Sound institutional management with good operative practices and an able, respected and locally as well as professionally anchored board are key factors to determine a training institution's

direction and performance in terms of quality training and employability of its graduates.

5. Relaunching and re-vitalising JTS, capitalising on the opportunities of federalization, may re-set the priorities and direction of the school, foster good operative practices, and thereby achieve training quality for better employability and labour market results

Conclusion with an institution building perspective: *TVET service providers' main function is to introduce women and men into gainful employment and build the "human capital" needed for socio-economic development. Going by available evidence (notably the CTEVT / Acin tracer study, 2016, but also strong tendencies in JTS), that function is not well fulfilled. Technical Schools, with JTS as an example, have, considering institution building theory and practice, not really become institutions yet. "According to Perlmutter, ... an institution ... is characterized by three attributes: [a] Its functions and services are related to society's commonly agreed requirements ...; [b] Its internal structures embody and protect commonly held norms ... of the society to which it is related; and [c] its achievements over time have included influencing the environment in positive ways..." (Perlmutter, as cited in Shah, 1999). Over the last twenty years it was mainly politics and (central) bureaucrats that have determined the course of action, excluding or reducing to a large extent the role of stakeholders of the world of work and professionals committed to the training and employment needs of those large parts of society for whom practically oriented technical education and vocational training is of interest, offering them an opportunity for decent jobs and continuing education opportunities.*

A new TVET act following Nepal's federalization policies may provide the opportunity to pursue a replicable re-launch process in JTS⁷, considering the institution building model shown in Annex 1 and operating practices typically found in high performing institutions (Annex 2). Such a process would need "...to ensure that (JTS has a) interested, respected, autonomous and self-perpetuating governance structure (Board / School Management Committee) with members drawn from a cross-section of their stakeholder groups and interested publics" (Shah, 1999). A new governance system would need to bring the worlds of education and work much more closely together again, anchor the organization in the emerging federal structure

(Provinces and local municipalities, Gau Palikas), evolve evidence based, impact oriented strategy and ascertain a performance oriented management and operation of the school⁸. With that perspective, the MoEST Policy 2019 (MoEST, 2019) envisages remarkable changes, such as: Province level governments to introduce a TVET Act including institutional arrangements and provisions for close cooperation with local bodies and stakeholders like Municipalities, schools and employers to manage, monitor and supervise TVET activities. The Federal government's responsibilities are, among other, the national policies to produce a skilled workforce through – among other measures – the establishment of a qualification framework, funding mechanism, and the professional development of trainers. Major functions and responsibilities are to be detailed at all institutional levels for a smooth and performing of the TVET system overall.

Outlook and Post Scriptum

Shortened training programs - notably much cut down on-the-job training (OJT) and apprenticeship (APT) components - and the strong expansion of Diploma courses under CTEVT institutions have substantially contributed to the degradation of training quality and the employability of TVET graduates of these institutions. Employment rates below 50% six to twenty months after graduation need the attention of policy makers and TVET system stakeholders for corrective action.

What is ironic is that with ENSSURE (Enhanced Skills for Sustainable and Rewarding Employment, Government of Nepal and SDC, 2015), the Ministry of Education, Science and Technology launched a program for the promotion of OJT and APT trainings and a stronger cooperation with the private sector (or employers more generally) for better quality and employability in TVET. For this initiative to succeed over the long haul, the management and governance systems of TVET institutions, including their linkages and cooperation with the world of work, need to be much strengthened. Federalization and professionalization can create opportunities in that direction, including the engagement of those sections of society and the economy having a genuine interest in practically oriented TVET. JTS may be encouraged into launching an institutional strengthening project developing good practices for other Technical Schools to replicate, considering their own local and regional contexts⁹.

Post Scriptum: The COVID 19 crisis has become an over-riding challenge for all educational institutions including TVET schools in Nepal, too. JTS and higher authorities (CTEVT and Province Governments) reported that they are making all efforts in trying to (a) cope with the present crisis to minimize losses; (b) keep continuity in managing school(s) at limited size(s); (c) run distance learning programs connecting teachers and students for theory classes; (d) be prepared for the recovery period; (e) convert the corona crisis into opportunities, and (f) learn lessons for crisis management beyond the current pandemic (in cases of natural calamities like other types of a pandemic, earth quakes, floods etc.). However, the current challenges and constraints are many (a) teachers lack distance mode teaching skills and experience and they are not well prepared to demonstrate technical skills through distance mode of teaching and learning; (b) forty percent of students do not have access to Wi-Fi and the purchase of data cards is unaffordable for many a trainee; (c) due to the national and global character of the current crisis, schools and trainees may face financial problems in the nearer future due to reduced income generating activities. However, the crisis also brought several lessons and opportunities to the fore: (a) TVET schools, especially rural technical schools, can make an impact by utilizing barren land by a vocationally skilled workforce for greater self-reliance in surrounding communities and in the places of origin of trainees and teachers; (b) an important development can be the return of job seekers from big cities and abroad to their home land in times of crisis. Under such conditions and developments, institutions must be able to transfer knowledge, skills and attitudes to their learners for greater resilience and self-sufficiency at work and in the community more widely. These are challenges and demands that only add significance to practically oriented educational institutions well governed and managed by stakeholders of the worlds of work, education and the community.

Notes

¹ While our analysis focuses on JTS, this institution can be considered as one representative (or “model”) of a substantial number of institutions - public and private - engaged in the training of Auxiliary Nurse Midwife (ANMs), Junior Technical Assistant (JTAs) and Sub-Overseers across Nepal. Many of its framework conditions and operational parameters (such as curricula, student admission processes, practical and theoretical content of programs, funding etc.) will be the same across the TVET system. Findings and insights

gained – and recommendations for improvement made – may therefore have systemic relevance (and not be valid for JTS alone).

- ² On linkages between actors and the innovativeness of processes and its measurement, see also OECD, 2010.
- ³ Business literature provides interesting concepts on the roles of Governance (the Board) and Management which are relevant for the TVET sector in Nepal, too. Governance concerns the processes, structures, and functions of an organization to achieve the intended objectives. However, management operates within an established norms, processes, policies, procedures, and strategies. On the importance of Boards in high performing institutions, see also Shah, 1999.
- ⁴ Logistical and communication limitations did not allow seeking the consent of almost 200 interviewees participating in individual and group interviews on the information and views expressed that proved of relevance to assess the two research hypotheses. No names are therefore mentioned in the study version foreseen for publication.
- ⁵ The periods graduates had been unemployed after their training at the time of data collection are not easy to gauge from the CTEVT / Acin study. The same was published in 2016, analysing the employment status of eight batches Diploma and TSLC holders each who graduated in the academic year (August) 2013. Data collection seems to (at least partly) have taken place after the earthquake 2015, that is approx. 19 months after graduation of the target graduates. On the other hand, the study report indicates employment searching periods of target graduates of six and nine months only at the time of information and data collection. Important for data interpretation however is also the prevailing general situation in Nepal in 2015, i.e. the earthquake, border blockages and a deep recession. But all that does not change the overall finding of employment rates much below “acceptable levels” (CTEVT / Acin, 2016, page 2).
- ⁶ On the concept of tacit and explicit knowledge, see Kikoski and Kikoski (2004). On organisational Culture and Tradition of Leadership, see also Shah, 1999 and Annex 2 below.
- ⁷ Shah argues that institutions caught in mediocre (or lower) performance practices cannot be brought to higher trajectories of performance again without a systematic re-launch process, with a competent Board having to play a key role (Shah, 1999).
- ⁸ Federal (macro) level governance of TVET may formulate clear policies, including the definition of level-wise functions and funding; Province (meso) level governance may provide technical and financial support and institutional arrangements, and monitor TVET operations and results; local (micro) level governance at municipality and school levels may primarily be concerned with the management of institutional operational practices, the mastery of skills in learning/competencies and the employability of trainees.
- ⁹ Such a project would need careful design, considering not only a new TVET act, but also on-going work for a Vocational Qualifications System, orientations and experiences of the ENSSURE project and insights from the framework presented in Renold et al (2019) on (robust) social institutions in education and training.

Conflicts of Interest

The authors have declared that there are no conflicts of interest.

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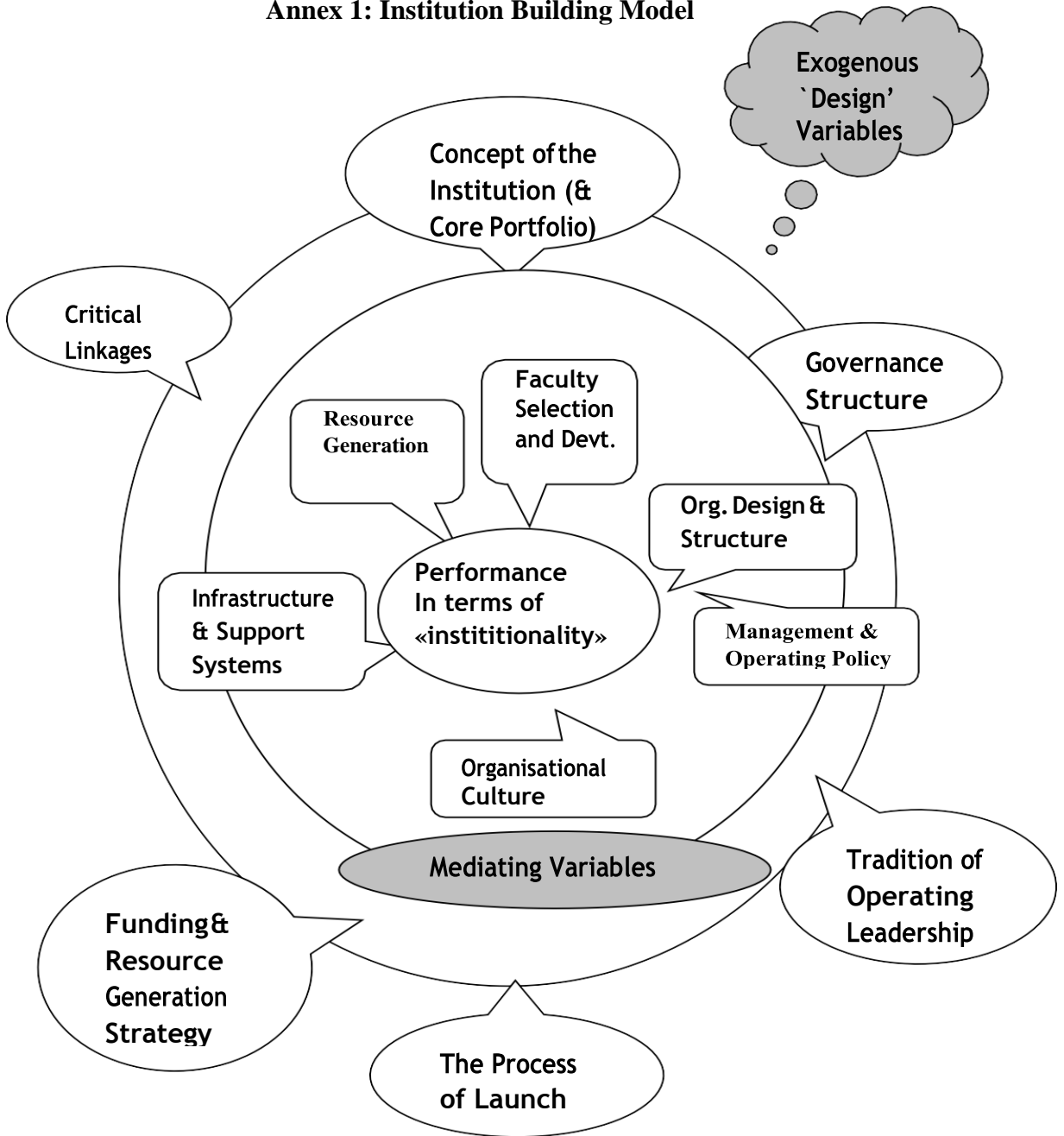
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Annex 1: Institution Building Model



(Adapted from Shah, 1999)

Annex 2: Jiri Technical School's Operative Practices Compared to High Performing Institutions (HPI)

Performance Area	Operative practices in HPI Class	Operative Practices in rest of the institutions [<i>Normal/ poor performing</i>]	Operative practices of Jiri Technical School	
			At initial phases	Now, after 25 years
1 a Faculty [Instructor] selection procedure	Open search: merit and suitability based	Deputation from Depts; heavy release on guest faculty	<ul style="list-style-type: none"> School could appoint up to assistant level staff/instructors locally 	<ul style="list-style-type: none"> All level staff and faculty centrally recruited Deputed staff up to 4 years
1 b Faculty competence development	High and continuous	Low and/or initially temporary	<ul style="list-style-type: none"> Continuous technical support by expatriates Learning opportunities 	<ul style="list-style-type: none"> All TITI based common packages Packages not updated
1 c Reward structure and growth	Competitive in merit and time-scaled based growth; substantial non-pecuniary rewards	Linked to govt; time-scale based; little or no linkage between performance and rewards; uncompetitive and limited range of rewards;	<ul style="list-style-type: none"> Technical allowance, Project scholarships, career growth opportunities 	<ul style="list-style-type: none"> Allowances cut off No scholarships for instructors/ staff No-pecuniary rewards

<p>2 Portfolio of products and services</p>	<p>Well-defined core portfolio creates powerful synergy; recurring feature; involve all staff who share responsibility for its quality and relevance; prestige-products; represents the core competencies of the Institutions; draw out the best in the institution; institutional excellence identified with quality of the portfolio;</p>	<p>Commonly, core portfolio of recurring products/services with joint ownership by staff missing; Institutional output is equal to (or less than) some of individual outputs; if a core product portfolio does exist, its indifferent quality becomes the bane of the institution.</p>	<ul style="list-style-type: none"> • Clear focus on TSLC for aptitude oriented target group, full year APT • Links with Community through services etc. • Quality conscious management, accountability of all staff for core product • Job search/placement service 	<ul style="list-style-type: none"> • Future of TSLC and Diploma programs? TS or “Campus”? • APT/OJT and field blocks much reduced • Outdated curricula • Community services/links much reduced • Growth of Diploma programs – unclear evidence of labor market orientation
<p>3 Organization design</p>	<p>Relatively flat, non-hierarchical, matrix-type; power with professionals; promote multi-disciplinarily; performance oriented;</p>	<p>Hierarchical; bureaucratic and authority oriented; power with administrators unable to adapt to performance needs</p>	<ul style="list-style-type: none"> • Power with technical staff • Substantial local autonomy and authority at Mgt & Committee levels • Performance assessed 	<ul style="list-style-type: none"> • Weak internal/external (with employers) processes, centralized key decisions, e.g. on portfolio • TVET Act still pending; capacity not yet developed to local SMC to resume TVET responsibility • Org and authority not updated.

4 Infrastructure and support services	Good or excellent; well used, well maintained, adapted to changing needs	Poor, good or excellent; often under-utilized and poorly maintained;	<ul style="list-style-type: none"> • State of the art infrastructure, workshops, well used, mainly preventive maintenance 	<ul style="list-style-type: none"> • All old infrastructures destroyed by earth quakes • About 40% reconstructed; master plan not based on strategic institutional development plan
5 a Pattern of resource generation	Resource generation without goal-displacement; core grants, project grants and fees	Mostly core grants; <i>projectitis</i> ; goal-compromise	<ul style="list-style-type: none"> • Strong financial support by govt and project • Internal income by practical work created • Maintenance fund established 	<ul style="list-style-type: none"> • Moderate support by the government • Internal incomes/ earning drawn to the center • New funding system not yet established
5 b Level of resource availability	Moderate to plentiful	Inadequate, moderate or plentiful	<ul style="list-style-type: none"> • Basically good based on systematic budgeting processes 	<ul style="list-style-type: none"> • Moderate
6 Organizational culture	Democratic; stress on self-regulation, creativity, excellence and internality of locus of control	Authoritarian, restrictive, discouraging creativity and innovation; externality of locus of control	<ul style="list-style-type: none"> • Emphasis on self-regulation, creativity and practical/field work 	<ul style="list-style-type: none"> • Based on central common by- rules • Increasingly “academic”

7 Management and operation	System oriented towards organizational performance and impact; high activity level; sensitive to client feedback; strategic approach	Rule-bound, target oriented, low activity level; insensitive to final impact of its work, to client feedback;	<ul style="list-style-type: none"> • With collaboration and consensus • System oriented at institution level 	<ul style="list-style-type: none"> • Lack of results orientation (outcomes) • “Under-management” at all levels; “Kathmandu orientation”
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(Adapted from Shah, 1999)