



Implemented by



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TVET Personnel in ASEAN

Investigation in five ASEAN states



Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.dnb.de> abrufbar.

Published by:

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

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Bonn and Eschborn

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Project:

16.2130.9.001.00

- Die Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) hat die Studie in Auftrag gegeben
- Die GIZ selbst handelt im Auftrag des Bundesministeriums für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ)
- Die GIZ ist für den Inhalt der vorliegenden Publikation verantwortlich.

Autor: Prof. Dr. Dieter Euler, St. Gallen
Design/Layout: Eusl-Verlag, Detmold

ISBN 978-3-940625-89-2

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Executive Summary

TVET personnel is the backbone of any advanced TVET system. Therefore, in most ASEAN member countries the further advancement of TVET personnel is identified as a high priority. This study provides a **comparative analysis of the current state of TVET personnel development in five ASEAN countries**. Beyond, it proves existing assumptions and critical findings derived from a literature review. The study strives for **identifying patterns but also exploring differences** and promising areas for taking further action.

Key questions of investigation

The investigation aims at providing a stocktaking on the conceptual and practical approaches of TVET personnel development in five countries: **Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam**. Among others, the following key questions are scrutinised:

1. What are typical forms of pre-service and in-service training in the region? What kinds of career development paths are available in the countries?
2. How is TVET personnel within the classifications TVET teachers, TVET school management and in-company trainers understood and further categorised? What differences and similarities can be clustered with regards to types of TVET personnel?
3. How is the demand for TVET personnel quantified in the ASEAN member states for the next years? Are the institutional settings and national framework conditions well prepared for the challenges in pre- and in-service training?
4. What are the conclusions and recommendations for national TVET systems and TVET delivery in a national and a regional context deriving from the analysis?
5. What good practices and lessons learned in the ASEAN member states in TVET personnel development can be concluded and used for transfer of knowledge?

Methodology and overview

Based on a literature review, a framework of investigation covering the key questions was developed and operationalised into a questionnaire and corresponding interview guidelines. National TVET experts from the five countries conducted a series of interviews with relevant stakeholders and compiled a document outlining the responses with regard to the questionnaire. Based on this empirical material, a comparative analysis was conducted. This paper describes both the process and findings of the investigation in detail.

The **framework of investigation described in chapter 2** distinguishes between pre- and in-service training for the three main target groups of TVET teachers, school managers and in-company trainers. It also includes the objectives TVET personnel development is going to promote as well as the contextual factors which may impact on the provision of any development initiative. The core of the framework distinguishes the various components of the personnel development process. The following figure provides an overview on the components considered and subsequently customised for the pre- and in-service training:

<i>Personnel Development Process</i>	Recruitment	Design of programs	Transfer into practice	Continuous updating
Phase-specific components	<ul style="list-style-type: none"> • Eligibility / pre-requisites • Procedures 	<ul style="list-style-type: none"> • Curriculum • Methods • Learning venues 	<ul style="list-style-type: none"> • (Formal and informal) Methods 	<ul style="list-style-type: none"> • (Formal and informal) Methods
Overarching components	<ul style="list-style-type: none"> • Institutions taking responsibilities in the process • Standards and regulations • Competency models • Good practices • Lessons learned 			

Figure 1: TVET personnel development process

Chapter 3 summarises the main findings from the empirical investigation. First, the overarching objectives of TVET in the respective country and the relevance of TVET personnel development are described (chapter 3.1). Then various contextual factors with relevance for TVET personnel development are explored (chapter 3.2). In chapter 3.3 emphasis is put on the types of TVET personnel as distinguished in the countries under investigation. An extensive chapter then is devoted to the build-up of TVET teachers (chapter 3.4) followed by corresponding chapters on school managers (chapter 3.5) and in-company trainers (chapter 3.6). Details on the responses on a country-to-country basis are provided in annex 2.

The study ends with a **comprehensive appraisal** and comparative overview of the status of pre- and in-service qualification for TVET personnel in the five ASEAN member states and holds some general and specific **recommendations**. A short overview of the summary and the recommendations can be found below. The comprehensive picture is provided in **chapter 4**.

Objectives and conditions of TVET personnel development

TVET in general and TVET personnel development in particular are not an end in itself. Rather, it is an instrument for pursuing economic, social or other *objectives*. In all five countries, TVET is primarily regarded as an instrument for promoting economic development. Beyond, some responses also emphasise potential positive impacts of

TVET on social integration and on dealing with societal problems such as poverty, violence and conflicts.

In the countries investigated, a widespread awareness on the *importance of TVET personnel development* for the further advancement of TVET in general is recognised. At least in politics, there is also a broad awareness of the need to improve the development of TVET personnel.

There is a broad appraisal for an *increased demand of qualified TVET personnel*. Overall, the actual *situation of TVET personnel* is described in different colours. For all interviewees there is no doubt that TVET as opposed to academic education is second choice. This has major implications especially on the *reputation, status and attractiveness* of both TVET programmes and TVET personnel. Compared to teaching personnel in general education, requirements towards TVET are perceived as more demanding. Reputation and status of TVET and general schools are considered more or less similar.

Development of TVET teachers

With regard to TVET teachers, responsibility for *pre-service programmes* lies with a ministry. In countries such as Lao PDR, Thailand or Vietnam, sole responsibility lies with one ministry (Ministry of Education in these cases). In countries like Cambodia, the responsibility is split between the Ministry of Education (teacher training for high-school teachers) and the Ministry of Labour and Vocational Training (teacher training for TVET schools). An exception can be found in Myanmar, where 13 ministries are involved in providing respective programmes. Ministries cooperate with institutes in charge for curriculum development, certification and sometimes quality assurance. While curriculum development and certification are widely organised and regulated, quality assurance is still at a side table in most countries. *In-service programmes* are less elaborated in most countries. In some countries, not the Ministry of Education but the Ministry of Labour is in charge of offering such programmes. Other countries report that schools are involved in the planning and operation of in-service programmes.

There are basically two *types of programmes*: (1) consecutive programmes which begin with technical training and are followed by pedagogical training, each completed with a degree; (2) concurrent programmes with technical and pedagogical studies simultaneously. Apart from the sequencing, some countries offer programmes on different levels with different eligibility criteria. Implementation of the pre-service programmes is carried out at universities or colleges. All programmes schedule some exposure to educational practice, lasting between one and four months. Some countries also schedule some exposure to vocational practice. Degrees awarded also differ in type and denomination, partly due to the duration of the programme. In-service programmes mostly follow a modularised course structure sometimes leading to certificates.

Apart from Thailand, creating an attractive *career pathway* in TVET institutions is not yet part of the promotion system. Missing career development paths increase the risk of qualified TVET teachers being poached by industry.

As to the *teaching methods* applied in TVET training programmes, responses of the interviewees do not provide a distinct picture. All types of teaching methods are applied. Although there is some light prevalence of teacher centred methods, other methods are also mentioned significantly.

There is some awareness of the *induction phase into teaching* at TVET schools. However, it seems that this phase is mostly organised informally by assigning new teachers to experienced ones serving as a mentor or coach.

Development of TVET school managers

With regard to TVET school managers, *recruitment and training* is organised and decided either on the national level by the responsible ministry or on the regional level by the respective provincial authorities. Again, practices are highly diverse in the five countries. In some countries, responsibilities lie with ministries on the national level. In Cambodia, the Ministry of Labour is in charge of recruitment of management for TVET schools while the recruitment of management for high schools is done at the provincial level. In Lao PDR, both the Ministry of Education and the provincial authorities are responsible for the appointment and promotion of TVET school managers.

In general, there are no specific *formal standards for TVET school managers* in place. In some countries it is indicated that the personality of the candidate is as important as the ability to master the factual part of the task profile.

Recruitment of school managers often follows procedures of internal promotion. In the various countries diverse criteria are considered with different weight. For example, Thailand puts a strong focus on formal criteria (e. g. academic degree, relevant work experiences). Cambodia relies on an academic degree plus school experiences.

While there is a *structured training programme* or at least a variety of courses for TVET school managers available in countries such as Cambodia or Thailand, such an offering is missing in other countries. Participation in programmes or course offerings is not reported to be compulsory. Apart from structured programmes or courses, there are also interesting informal ways for school managers to broaden their expertise. Among others, respective ideas comprise hiring a resource person with industry experience from outside, professional learning communities, workshops for sharing experiences and challenges. However, responses of the interviews suggest that there are many ideas and recommendations but less established experiences and practices.

Development of TVET in-company trainers

With regard to in-company trainers, the training of trainers is regarded as a responsibility of companies. It seems obvious that companies need some support in developing their training staff. There are few examples indicating how such support can be organised. Some countries have started to develop courses or programmes providing opportunities for company trainers to acquire relevant competencies. Such programmes are offered in Thailand with a 30h and an 80h programme addressing training roles in the delivery and management of training. Apart from Thailand, there are no *standards and regulations* in place.

As the appointment of trainers is regarded to be in the sole responsibility of companies, company-specific *recruitment procedures* apply. There is no obvious pattern to refer to. Similar to the current practice with school managers, the introduction of informal ways of competency development seems quite promising. In practice, there are hardly any established experiences. Interviewees mention just a few examples such as networking between companies, knowledge sharing seminars and workshops, and online communities. Overall, these areas seem to be at their very early stages.

Recommendations

The comparative analysis shows a remarkably high degree of diversity in the practices of TVET personnel development among the five countries. This partly reflects the different political, economic, cultural and societal contexts these countries face. Given this diversity, next steps and priorities for improvement will also vary between the countries. Thus, any recommendations will most likely be of different relevance for different countries.

From the demand side, TVET personnel development is clearly high on the agenda for the promotion of TVET. If *relevance* is approached from the supply side, attractiveness for working in a TVET school or taking responsibilities as an in-company-trainer could still be improved considerably. One pre-requisite towards boosting the attractiveness would be to define *standards for teaching and management positions at TVET schools* on a level where these positions are perceived as professional occupations. Although such standards do not need to be harmonised in all aspects for all countries, there should at least be some consensus on minimal requirements that a TVET teacher or school manager at a certain level is going to meet. Standards should ideally be defined in terms of competency profiles. Within a competency framework, it would also be easier to define *career development paths* which are currently missing in most countries. Such career paths are of major importance for increasing the attractiveness of becoming a TVET teacher.

Procedures and corresponding responsibilities for *curriculum development* should be considered in terms of relevance and adaptability of the curriculum. In order to develop curricula meeting the two criteria, two approaches might be considered. Firstly, both school and company practitioners should be involved adequately in curriculum development processes. Secondly, curricula should not regulate every

detail but confine themselves to setting standards in core elements but leave room to schools for extensions and additions according to changing circumstances. Part of the core curriculum should be a considerable exposure to both educational and vocational practice.

Structured ways of *competency development for TVET school managers* are rare exceptions. In medium term, the following two developments could be pursued: (1) Essential competencies in the area of administration, quality management, team leadership, etc. should be offered in a set of modularised courses. The modularised structure would allow using the courses flexibly for different target-groups (e. g. school directors, department heads) and countries. (2) Structured and facilitated opportunities of informal competency development should be available for school managers already in office. They could be organised as professional learning communities and aim at sharing experiences, discussing common challenges and sometimes entering into joint projects. Existing ideas and suggestions can be taken up and conceptualised on a national or regional basis.

Competency development for in-company trainers is also in its initial stages. Strategies in this context resemble those for school managers. However, companies and employer's associations need to be much more involved. Professionalization of in-company trainers corresponds with the responsibilities of industry and economic branches to contribute to the promotion of TVET. Any attempts to promote TVET personnel development with regard to companies will inevitably depend on developments on this general level.

1. Research approach

1.1 Context

The deepening of South East Asian integration poses the challenge to the ten ASEAN member countries to create the basis for an integrated regional economy and develop a common basis for social development and security by overcoming current differences (ADB & ILO 2014, 51-56). “The prospects of deeper regional integration are vast. But whether the economic gains from deeper integration benefit all women and men will depend heavily on skills development policies. If the quality of education and training systems are enhanced and better aligned with national development objectives, ASEAN could become a regional production centre driven by skills, innovation and creativity.” (ADB&ILO 2014, 64) Thus, the development of the national TVET systems plays an important role in implementing the economic, social and cultural development objectives of the ASEAN countries. As the quality of any system largely depends on the quality of those implementing it on a day-to-day-basis, the further advancement of any national TVET system relies on the motivation, competencies and commitment of the TVET personnel.

Thus, TVET personnel is the backbone of any advanced TVET system. Therefore, it is hardly surprising that the development of TVET personnel has a high priority on the agenda of the ASEAN countries (Paryono 2013, 1). Regional declarations such as the Shanghai Consensus (2012), the Kuala Lumpur Declaration (2015) or the Vientiane Joint Statement (2015) express the need and willingness to enhance the quality of TVET personnel in general and the professional development of TVET teachers in particular.

However, one of the reasons why the development of TVET personnel is a pressing issue is due to the fact that in most ASEAN member countries there is a lack of TVET personnel in both quantity and quality. A literature review (chapter 2) summarises severe challenges that were described in many different reports and need further consideration. One of the objectives of this study is to describe these challenges in more detail in order to create better references for taking action.

1.2 Key Questions

The study is to pursue the following key questions:

1. What is the relevance of TVET personnel for development in ASEAN?
2. What are typical forms of pre-service and in-service training in the region? What kinds of career development paths are available in the countries? Are there any patterns visible within the ASEAN region?
3. How is TVET personnel within the classifications TVET teachers, TVET school management and in-company trainers understood and further categorised? What differences and similarities can be clustered in the ASEAN member states with regards to types of TVET personnel? What national differences are there and what possible clusters can be identified?

4. How is the demand for TVET personnel quantified in the ASEAN member states for the next years? Are the institutional settings and national framework conditions well prepared for the challenges in pre- and in-service training?
5. What are the conclusions and recommendations for national TVET systems and TVET delivery in a national and a regional context deriving from the analysis? Which forms of pre-service and in-service qualification for TVET personnel seem to be the most promising in South East Asia?
6. What good practices and lessons learned in the ASEAN member states in TVET personnel development can be concluded and used for transfer of knowledge?

1.3 Research Process

As almost any research, this study does not start from scratch. There is already considerable literature touching on some of the key questions outlined above. While existing literature has to be taken into account, the study is expected to reach beyond and provide additional insights.

A major challenge is access to relevant and valid data in the respective countries. Statements on the structure, processes and (critical) assessment of TVET personnel development may be biased or highly subjective. An extensive multi-stakeholder survey is already very resource-intensive with regard to one country not to mention for many countries. Within the given resource frame, it was decided to pursue a three-level-approach of data gathering and evaluation:

- Responsibility for the overall research and scientific quality is taken by the author of this study. Part of the research process is the conduct of a literature review, the design of a research framework and the translation of the key research questions (chapter 1.2) into interview guidelines.
- In each of the five selected countries (Cambodia, Lao PDR, Myanmar, Thailand and Vietnam), national TVET experts conducted interviews with a series of key stakeholders based on the interview guidelines. Results of the interviews are consolidated in country reports answering all questions operationalised in the interview guidelines.
- An international coordinator is responsible for the proper briefing of the national consultants and ensures that the national reports are complete and consistent.

Based on these different roles and responsibilities, the research process was structured along the following steps:

- Review relevant literature: Available research articles, policy documents, case reports etc. were evaluated. The focus of the literature review was put on the typology of TVET personnel and the relevance of TVET personnel for the overall development of TVET systems. An objective of that step was

to identify relevant phenomena and constructs which were to be further investigated in the empirical part of the study.

- Develop framework of investigation: Based on the given key questions (chapter 1.2) and the literature review (chapter 2.1), a framework of investigation was developed (see chapter 2.2).
- Develop questionnaire and corresponding interview guidelines for national coordinators: The framework of investigation was transformed and elaborated into guidelines (see annex 1) to be applied by the national TVET experts in their semi-structured stakeholder interviews.
- Collect data and interview stakeholders in selected countries: National TVET experts had to check who was best suited to provide relevant data to the questions addressed in the interview guidelines. They were instructed to draw on a mix of different stakeholders for two reasons: (1) to gather the expected information as authentically and precisely as possible; (2) to crosscheck given information from many perspectives.
- Validate completeness, perspicuity and substance of country reports: The international coordinator had been in continuous contact with the national TVET experts to achieve the utmost quality of their country reports.
- Conduct comparative analysis of country reports: Data in the five country reports was analysed by referring back to the key questions and the elaborated set of questions in the questionnaire and interview guidelines. One focus was put on the identification of similarities and differences, another one on remarkable and striking peculiarities or examples.
- Draft report, interpret and discuss results.

2. Framework of investigation

2.1 Literature review

According to a widely quoted statement of Umberto Eco, research is like standing as a dwarf on a giants' shoulder. And indeed, there is already some literature to build on addressing both the development of TVET systems in the Asian context and issues of TVET personnel development in particular. The specific focus of this study narrows the research areas down to the following aspects:

- Relevance of TVET personnel development for the overall educational, social and economic advancement.
- Ways of capturing different types of TVET personnel.
- Critical issues and challenges with regard to the development of TVET personnel.

The literature review aims at providing relevant categories which could then be taken up and further investigated in the subsequent empirical part of the study.

2.1.1 Relevance of TVET personnel development

The advancement of TVET personnel development is not an end in itself but a means for promoting a country's educational, social and economic objectives.

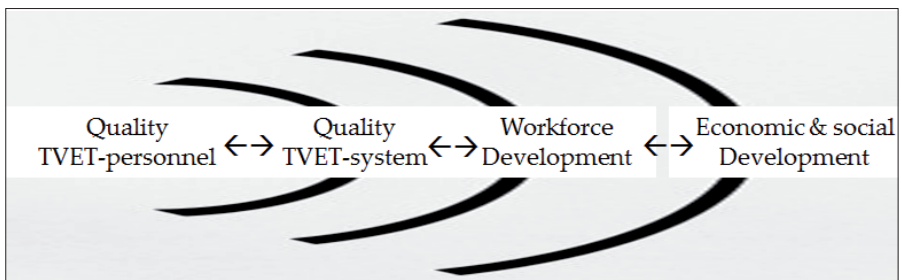


Figure 2: Interdependence of TVET quality and the achievement of development objectives

Given this line of reasoning, the relevance of TVET personnel development at least partly relates to the stated objectives and given challenges to achieve them in a given country. The case of Viet Nam provides an excellent example for the challenges many countries face (ADB 2014). Job growth in Viet Nam has been strong over the last decade, with changing employment patterns that reflect the changes in the economic structure. Agriculture's share of employment has declined, while industry and service sector employment has increased. "If Viet Nam is to expand as an industrialised country, it must develop highly skilled industrial workers who can increase enterprise productivity, product quality, and service standards." (ADB 2014, 1) At present,

only 13% of the employable workforce has vocational qualifications. The shortage of highly skilled workers has reached worrying levels. “A major challenge for the vocational education and training (VET) sector, therefore, is to produce more and better qualified skilled workers who can enhance the pace of economic growth.” (ADB 2014, 1f.) So far, TVET systems in the South East Asian states have not adapted to the new challenges arising with the introduction of the ASEAN economic community (AEC) and the ASEAN social and cultural community (ASCC) in 2015. Improving the quality of TVET systems is complex and requires action on different levels. The development of TVET personnel needs particular consideration because its quality and availability constitutes the underlying foundation of any TVET system and, thus, the quality of TVET outcomes.

2.1.2 Types of TVET personnel

TVET personnel comprise teachers at schools, trainers in companies or training centres and management staff in TVET institutions. With regard to TVET teachers and in-company trainers, the following categories provide some further distinctions (Parsons et al. 2009, 79):

- teachers of basic or general education subjects within TVET schools;
- teachers of theoretical or knowledge-based components of TVET programmes at TVET schools;
- teachers, trainers and instructors of practical exercises / programmes (practicum in some contexts, apprenticeships or internships in others) in vocational or work preparation and awareness programmes, or in some dual systems as apprenticeship and internship instructors or supervisors;
- trainers, training coordinators or training advisers working to integrate skills training and knowledge-based learning for work-based learners, typically working for employers in companies.

Often, especially teachers combine elements of these categories. For example, in many countries there is the so-called “integrated teacher” who covers both theoretical and practical instruction in TVET programmes. It is also worth mentioning that some types of TVET schools are called “colleges”, partly because this terminology is perceived as the institution being in the upper ranks of educational hierarchy.

Apart from the types of teachers and institutions, there are models framing the types of competencies to be mastered by professional TVET personnel. Based on a distinction introduced by Shulman (1986), three areas of competencies are put forward: (1) content knowledge; (2) pedagogical content knowledge; (3) pedagogical knowledge. This structure could indeed help to organise teacher training programmes at universities, but only partly catches the reality of requirements the TVET personnel faces in practice (see also Cort et al. 2004). For that purpose a modified framework outlined below seems to cover the demands of TVET institutions much better.

DOMAIN OF EXPERTISE	Theory	Practice
Professional domain	Subject specific technical / expert knowledge	Subject-specific teaching methods („Fachdidaktik“)
TVET pedagogy	e.g. VET psychology; teaching and learning methods; assessment theory	e.g. teaching skills; assessment skills and techniques; (integrative) use of digital media
TVET management	e.g. knowledge on school organization and links to external stakeholders; ability to reflect on own practice („reflective practitioner“)	e.g. skills to collaborate / network with key stakeholders (esp. companies); motivation and commitment for continuous improvement of school environment

Figure 3: Areas of competency to be facilitated in TVET personnel development programmes

This framework also distinguishes three domains of expertise (see similarly: SEAMEO VOCTECH & GIZ-RECOTVET 2017):

- (1) Professional domain in the respective vocational area;
- (2) TVET pedagogy primarily covering curricular, teaching and learning and assessment dimensions and
- (3) TVET management covering tasks within the TVET institutions and with external stakeholders.

All areas comprise both theoretical knowledge and the practical skills to transfer the respective knowledge into practice. In addition, one could add a further dimension related to the development of attitudes, commitment and values.

Basically, this framework is applicable for all types of TVET personnel. However, not all parts are equally relevant for the various functions. For example, a TVET teacher would have its focus on the upper two domains while school managers would preferably focus on the bottom domain.

2.1.3 Critical issues with regard to the development of TVET personnel

This sub-chapter aims at identifying critical issues introduced in relevant literature which could then be investigated in the empirical part of the study. Therefore, the following information cannot do justice to the huge heterogeneity between different countries and their TVET systems in the ASEAN region. The analyses can only provide a broad approximation to the situation of TVET personnel.

Overall, there is still a ***lack of linkages between TVET system and the labour market***. The education system at universities or colleges (where most of the TVET personnel is trained) and at TVET schools (where TVET teachers are employed) is to a large degree separated from the economic system and the labour market (where graduates from TVET programmes seek for an employment). In many countries, it is difficult to link specialised TVET teacher training programmes to practical application in the workplace. Even in advanced TVET systems, there is little evidence of industrial placements that would provide future teachers with current experience and work practices (Marope et al. 2015, 115). There is also no requirement for TVET teachers to have any workplace or industry experience. The majority of TVET teachers have little or no industrial or technical experience in the areas in which they teach.

The ***curriculum of teacher training programmes*** is closely related to the missing exposure of TVET teachers to practical experiences. In a majority of these programmes the academic teaching model prevails and pushes practical skill training to the margins. Curricula primarily focus on the acquisition and memorization of theories and neglect their application with regard to real life problems. As a consequence, the inert knowledge can be reproduced in exams but does not prepare learners to tackle practical challenges. In some countries, vocational curricula are defined by government officials with little or no exposure to the world of work (Axmann 2004). Within these programmes, TVET pedagogy is often taught insufficiently. As Nielson (2011, 19) stated: “Many national systems which require a pedagogical foundation for TVET practitioners continue to derive this from teacher training rooted in general education contexts. Also the demand for more learner-centred approaches in vocational contexts calls for more specific and applied TVET knowledge which is not always served well by current approaches. Universities in most cases lack the application and workplace experience to respond effectively. The challenge is to combine the world of work and the world of education and consequently different fields of science.” Thus, pre-service and in-service training programmes do not introduce teachers to workplace learning theory or to various models available for the delivery of competency-based training and structured on-the-job training programmes.

Another weak point in the learning chain relates to the ***quality of learning processes and learning material***. Many of the teacher-training institutions do not have adequate technical workshops in which teachers can develop technical skills. This has resulted in the exclusive teaching of basic technical concepts, and has not equipped learners with the high-level skills sought by government or industry (ADB 2014, 29). Despite the widespread demand for a paradigm shift from teacher-centred towards learner-centred pedagogy, in many countries there is still a strong tendency to equate teaching and training in TVET with pure lecturing. This is often the least suitable preparation for working life and lifelong learning where new problems and as yet unknown job and skill requirements will demand ongoing problem solving without external coaching. Teaching and training materials are often outdated and not relevant for specific skills development with regard to work environments (ILO 2010, 21). Many classrooms and technical workshops dispose of limited materials and equipment. This places further pressure on the skills of teachers and workshop instructors to simulate the workplace

environment. It hampers their ability to teach students how to apply the theoretical foundations they have learned (ADB 2014, 31).

Consequently, the **student assessment** follows the regulations of the curriculum and the culture of learning in the institutions. Technical skills and their respective application are overlooked in teachers' assessments or not valued during the development process. Rote learning processes are assessed in exams which expect students to provide memorised facts rather than solving authentic problems or demonstrating skills and attitudes in real life settings. Related to this is the lack of checks-and-balances within the system. For example, teachers and instructors test their own students, and institutions certify their own graduates. Quite often, there is no national examination for vocational training.

Also, in many countries there is not yet a coherent **qualification and/or quality framework** which covers the (various) types of workplaces for TVET personnel. Such frameworks could provide standards for the various components of the learning chain and serve as a compass for shifting widespread practice towards a new direction.

It is hardly surprising that the practices outlined above severely challenge the quality both in TVET teacher training programmes and in TVET programmes themselves. This adds to the fact that **attractiveness of TVET** as opposed to academic pathways is limited. In many Asian countries, TVET is still perceived less valuable than general education. "China and South Korea, for example, with their strong Confucian cultural heritage think of blue-collar workers such as technicians and labourers as lower-class and somehow despised by the general population." (Ratnata 2013, 2) As a consequence, the first option for parents is to enrol their children at university. Many of them fail and then take up one of the (mostly school based) TVET programmes as second choice.

At an experts meeting on TVET teacher education, representatives from many countries pointed to the need for continuous professional development (training programmes, teaching aids and materials), and constant and regular staff-capacity building, as the knowledge and requirement in practice are fast changing (UNESCO-UNEVOC 2012). Although all these demands are well founded, the challenge has to be framed a bit broader. As a result of the low status of TVET and the comparatively low salary for TVET personnel, many countries report that motivation of TVET staff remains low (UNESCO-UNEVOC 2012, 6, 21). Correspondingly, many countries are unable to recruit an adequate number of new TVET teachers. In order to counteract the vicious circle of low status and low quality, both working conditions and recruitment practices need considerable improvement.

As to the **working conditions**, an important component is the motivation of the TVET personnel. Motivation relates to extrinsic and intrinsic factors which can both be influenced from outside. Major extrinsic factors are the salary and the outer working conditions. With regard to TVET personnel, the following principles should be considered when taking action in this area:

1. Salaries of TVET personnel should at least compete with the remuneration teachers from other general secondary schools receive. In some nations TVET teachers and instructors are not treated in the same manner as academic teachers with regard to their various conditions of service. In particular, issues of different terms for remuneration, promotion and benefits can be a major source of frustration. This often leads to alienation and high teacher turnover, especially when highly qualified TVET personnel can be tempted away by higher salaries in commercial enterprises (Maclean & Wilson 2015, 31).
2. Correspondingly, the teacher-student-ratio in TVET schools should be the same than in other schools with students in the same age cohort.
3. A clear vision of the respective professional identities and profiles of TVET teachers and trainers should be developed and pro-actively publicized.
4. There should be various pathways to achieving qualification as TVET teachers and trainers with corresponding curricula and quality standards.
5. Qualifications relevant to the TVET teachers and trainer professions should be referenced to national qualifications frameworks.

2.2 Transformation into framework of investigation

A framework of investigation provides an instrument to serve different objectives. First of all, it covers the key questions and transforms them into a transparent structure of categories relevant to answer the questions. Secondly, it provides a reference for guiding the search and gathering of empirical data – or more concretely: for drafting the instruments (questionnaire, interview guidelines) exhausting the richness of experiences and knowledge in the empirical field. Thirdly, it helps to structure the evaluation and interpretation of the collected data and also supports the exploration of missing spots in the data collection.

As a first approach, a broad framework of investigation was designed as follows:

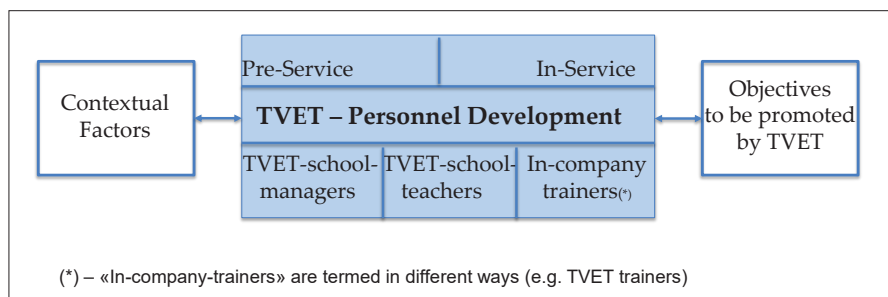


Figure 4: Broad framework of investigation

It introduces the various types of TVET personnel (namely TVET school teachers, TVET school managers and In-Company Trainers) and distinguishes between pre- and in-service training. The development of TVET personnel is not an end in itself but an important step for promoting development objectives reaching beyond. That is why the objectives to be promoted by TVET in general and TVET personnel development in particular are to be integrated into the framework.

Also relevant contextual factors which may impact on the provisions of TVET personnel development are of particular interest for the investigation. As to the contextual factors, the literature review highlights the following as particularly relevant:

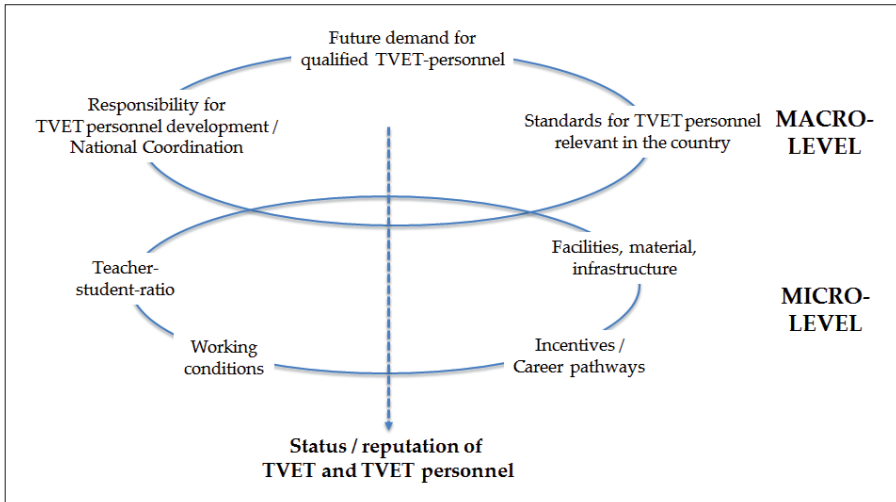


Figure 5: Contextual factors with relevance for TVET personnel development

Within the broad framework of investigation, the “TVET personnel development”-box needs further elaboration and specification. As major categories to be considered in the country-by-country investigation, a distinction is made between those which relate to specific phases of a development process and those which can be regarded as overarching. The following figure provides the details:

<i>Personnel Development Process</i>	Recruitment	Design of programs	Transfer into practice	Continuous updating
Phase-specific components	<ul style="list-style-type: none"> • Eligibility / pre-requisites • Procedures 	<ul style="list-style-type: none"> • Curriculum • Methods • Learning venues 	<ul style="list-style-type: none"> • (Formal and informal) Methods 	<ul style="list-style-type: none"> • (Formal and informal) Methods
Overarching components	<ul style="list-style-type: none"> • Institutions taking responsibilities in the process • Standards and regulations • Competency models • Good practices • Lessons learned 			

Figure 6: Elaborated TVET personnel development process

The components structured in the elaborated TVET personnel development process need specification with regard to the three focused target-groups. Not all of them are equally important for pre- and in-service training initiatives.

<i>Personnel Development Process</i>	Recruitment	Design of programs	Transfer into practice
Phase-specific components	<ul style="list-style-type: none"> • Eligibility (prior degree) / pre-requisites • Procedures 	<ul style="list-style-type: none"> • Curriculum • Methods • Learning venues (university, college, etc.) • Exposure to vocational practice and / or educational practice) 	<ul style="list-style-type: none"> • Induction of beginners • (Formal and informal) methods • Learning resources
Overarching components	<ul style="list-style-type: none"> • Institutions taking responsibilities in the process • Standards and regulations • Competency models • Good practices • Lessons learned 		

Figure 7: Elaborated TVET personnel development process / Pre-service TVET school teachers

<i>Personnel Development Process</i>	Recruitment	Design of programs	Transfer into practice	Continuous updating
Phase-specific components	<ul style="list-style-type: none"> • Selection criteria • Procedures 	<ul style="list-style-type: none"> • Curriculum • Methods • Learning venues (university, college, on-the-job, ...) • Exposure to vocational practice 	<ul style="list-style-type: none"> • (Formal and informal) Methods • Learning resources 	<ul style="list-style-type: none"> • (Formal and informal) Methods • Adaption to continuous changes in economy and society • Learning resources
Overarching components	<ul style="list-style-type: none"> • Institutions taking responsibilities in the process • Standards and regulations • Competency models • Good practices • Lessons learned 			

Figure 8: Elaborated TVET personnel development process / In-service TVET school teachers

3. Main findings

This chapter summarises the main findings from the empirical investigation. First, experts were asked to describe the overarching objectives of TVET in the respective country and appraise the relevance of TVET personnel development (3.1). Then various contextual factors with relevance for TVET personnel development (figure 7) are explored (3.2). In chapter 3.3 emphasis is put on the types of TVET personnel as distinguished in the countries under investigation. An extensive chapter then is devoted to the build-up of TVET teachers (3.4) followed by corresponding chapter on school managers (3.5) and in-company trainers (3.6).

In order to guarantee reader-friendliness, this chapter provides a summary of the main findings without giving details on statements by the interviewees. Those who want to track the details and re-construct the interpretation provided in this chapter are invited to turn to annex 2.

3.1 Objectives and relevance of TVET development

TVET is not an end in itself. Rather, it is an instrument for pursuing economic, societal, cultural or other **objectives**. In all five countries, TVET is primarily regarded as an instrument for promoting economic development. This is hardly surprising as a flourishing economy is supposed to be the driver for growth and subsequently a condition for societal development. Some statements in the responses also emphasise potential positive impacts of TVET on social integration and on dealing with societal problems such as poverty, violence and conflicts. This also reflects the different perspectives to be taken when arguing for improvements in TVET: While one perspective puts the economy in the centre of argumentation, the other one emphasises the potential of TVET to tackle burning societal problems.

At least in four of the five countries investigated, widespread **awareness on the importance of TVET personnel development** for the further advancement of TVET in general is recognised. At least in politics, there is also a broad awareness of the need to improve the development of TVET personnel. Of course, this does not necessarily mean that adequate action is taken to transform political plans into practice. Partly different is the view from Myanmar. Some of the interviewees mention that public and partially political awareness and support are generally lacking.

3.2 Conditions

Interviewees were asked to outline the development of the **demand of qualified TVET personnel** in a 3-5 years perspective. There is a broad appraisal for an increased demand of qualified TVET personnel. This appraisal often follows the assumption that the demand of qualified labour to be trained in TVET programmes will also increase considerably. Thailand's respondents also emphasise the need that along with the quantitative view there has to be correspondingly a focus on qualitative issues as well. As an example, they point at the need to facilitate more interactive learning processes.

Overall, the actual **situation of TVET personnel** is described in different colours. For all interviewees there is no doubt that TVET as opposed to academic education is second choice. This has major implications especially on the **reputation, status and attractiveness** of both TVET programmes and TVET personnel. Compared to teaching personnel in general education, different statements lead to a consistent overall picture. In terms of working conditions, requirements towards TVET are perceived as more demanding. In many cases extra work is compensated with monetary or other incentives. With regard to resourcing with facilities and learning materials, interviewees from Myanmar report considerable problems while respondents from Cambodia, Lao PDR and Thailand point to the fact that TVET schools are comparatively better resourced than general schools. Reputation and status of TVET and general schools are considered more or less similar.

3.3 Types of TVET personnel

In the various countries there are different practices of categorizing TVET personnel. The broad distinction of TVET teachers, TVET school managers and in-company-trainers is appropriate.

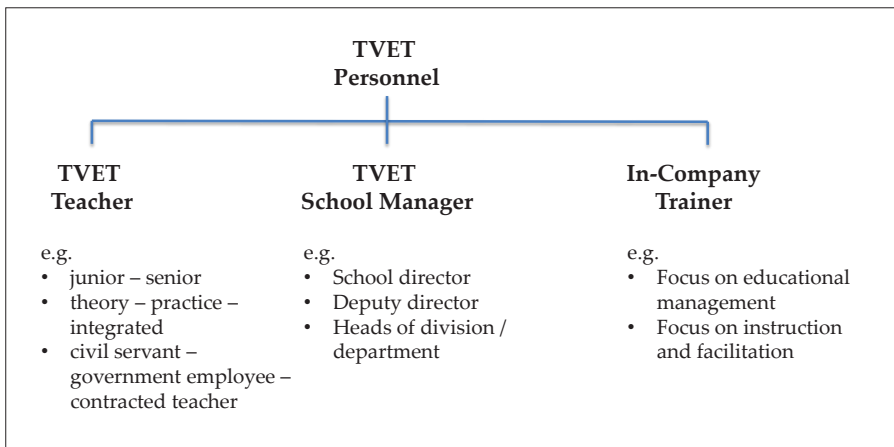


Figure 9: Types of TVET personnel

As to **TVET teachers**, there are some differences, often with underlying hierarchical connotations. For one, TVET programmes serve different target groups with different degrees (e. g. junior vs. senior technical instructor in Cambodia). A common distinction at TVET schools is the discrimination of theory, practice and integrative teachers. Finally, in countries such as Thailand and Cambodia there is an employment hierarchy discriminating teachers employed as civil servants, as government employees and as contracted teachers.

With regard to **TVET school managers**, there is often a mixture of hierarchical and functional differentiation. Top leadership is exercised by a school director (syn.: headmaster, principal), often represented by a deputy director. At least larger schools have heads of divisions, departments, sections or the like, sometimes specified by responsibilities in defined areas.

In-Company-Trainers is mostly used as an umbrella term for those in charge of internal TVET activities in companies. It is fair to say that so far TVET in companies has been a marginally developed area. Consequently, this group has not had the opportunity to develop a distinguished identity. Also there is no distinction between different roles such as VET managers and VET instructors in companies.

3.4 TVET teachers: Pre- / In-Service Training

3.4.1 Institutions designing training programmes for TVET teachers

Responsibility for **pre-service programmes** lies with a ministry, in most cases either with the Ministry of Education and / or with the Ministry of Labour / Industry (or similar denominations). In countries such as Lao PDR, Thailand or Vietnam, sole responsibility lies with one ministry (Ministry of Education in these cases). In countries like Cambodia, the responsibility is split between the Ministry of Education (teacher training for high-school teachers) and the Ministry of Labour and Vocational Training (teacher training for TVET schools). An exception can be found in Myanmar, where 13 ministries are involved in providing respective programmes.

The importance of TVET can be interpreted from the position within the responsible ministry: Is TVET positioned as an own department high in the hierarchy or is it just part of a larger department with limited power and resources? Responses from the interviewees of five countries do not allow a clear conclusion on this subject.

Ministries cooperate with institutes in charge for curriculum development, certification and sometimes quality assurance. Those institutes are either associated to the ministry (e. g. in Thailand) or are part of a university (e. g. in Lao PDR).

While curriculum development and certification are widely organised and regulated, quality assurance is still at a side table in most countries. In the case of Thailand, quality assurance is overseen by bodies under the authority of the ministry. On a more detailed level, it would be interesting to see whether there is a conflict of interest in that case. One major principle in the governance of quality management relates to the fact that those who are controlled cannot be in charge of conducting the control processes.

In-service programmes are less elaborated in most countries. In some countries, not the Ministry of Education but the Ministry of Labour is in charge of offering such programmes. Other countries (e. g. Cambodia, Vietnam) report that schools are involved in the planning and operation of in-service programmes.

3.4.2 Types of programmes

There are basically two types of programmes: (1) consecutive programmes (Vietnam, Cambodia) which begin with technical training and are followed by pedagogical training, each completed with a degree; (2) concurrent programmes (Lao PDR, Thailand, in some areas also in Vietnam) with technical and pedagogical studies simultaneously. Myanmar currently offers courses instead of programmes, without a coherent programme frame.

Apart from the sequencing, some countries offer programmes on different levels with different eligibility criteria. For example, Cambodia distinguishes junior programmes requiring an associate degree / diploma and senior programmes requiring a bachelor degree for admission. Similar structures with different details exist in Lao PDR and Vietnam.

Implementation of the pre-service programmes is carried out at universities or colleges. All programmes schedule some exposure to educational practice, lasting between one and four months. Lao PDR and Vietnam also schedule some exposure to vocational practice, while this component is missing in Thailand and Cambodia. Vietnam devotes 25% of the programme duration for technical training conducted at university workshops and companies.

Degrees awarded also differ in type and denomination, partly due to the duration of the programme. Cambodia grants an associate degree for its junior programmes, Lao PDR grants a higher diploma degree for its two-year programme. Bachelor degrees are granted within different contexts: within concurrent programmes in Lao PDR and Thailand after two years, whereas a consecutive programme in Cambodia leads to a bachelor degree after 10-12 months.

In-service programmes mostly follow a modularised course structure sometimes leading to certificates.

3.4.3 Stages of competency development

On a more detailed level, each country offers several pathways into different types of employment for different types of teachers. The following figures provide an overview for the five countries investigated in this study.

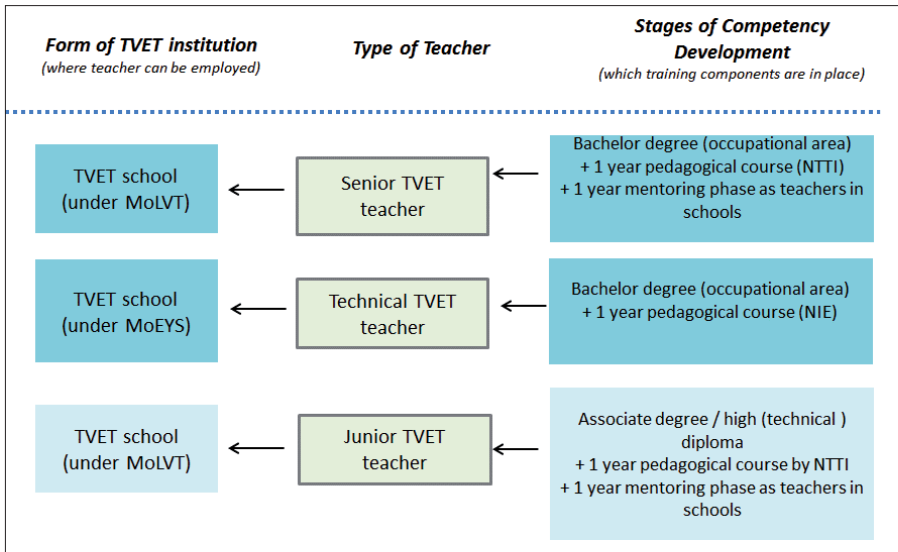


Figure 10: Cambodia

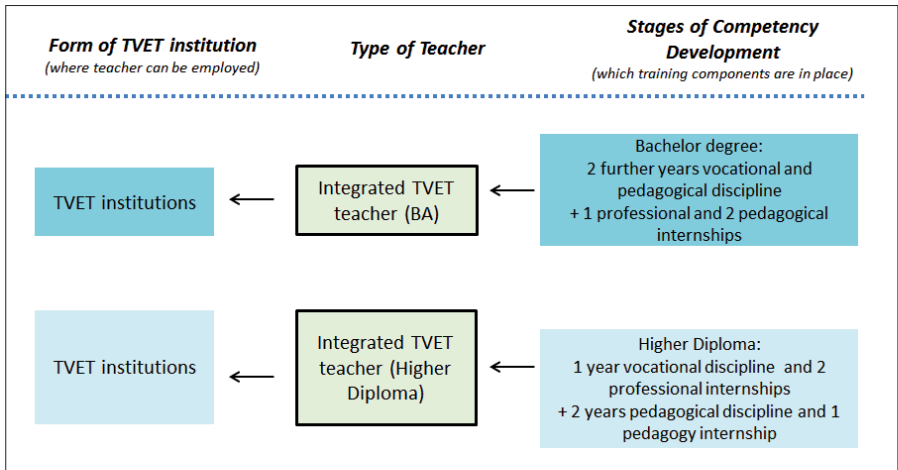


Figure 11: Lao PDR

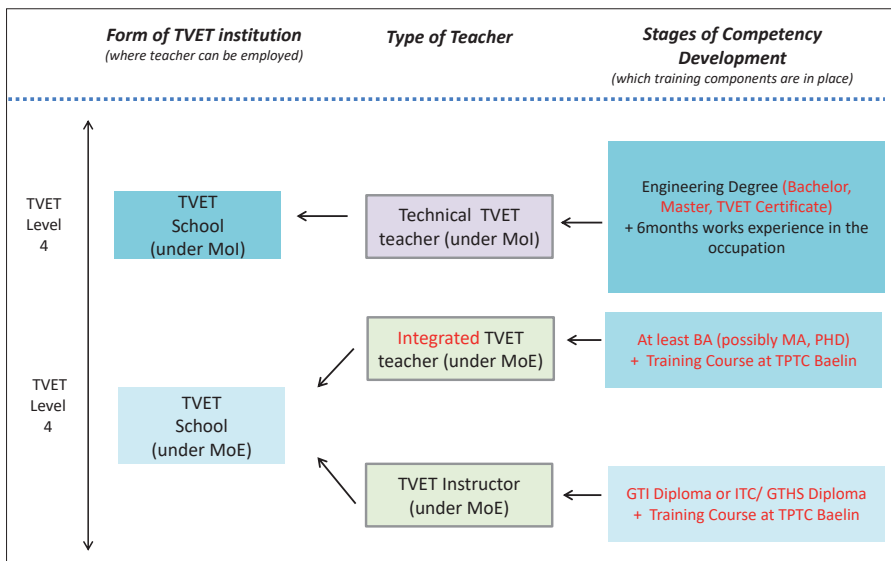


Figure 12: Myanmar

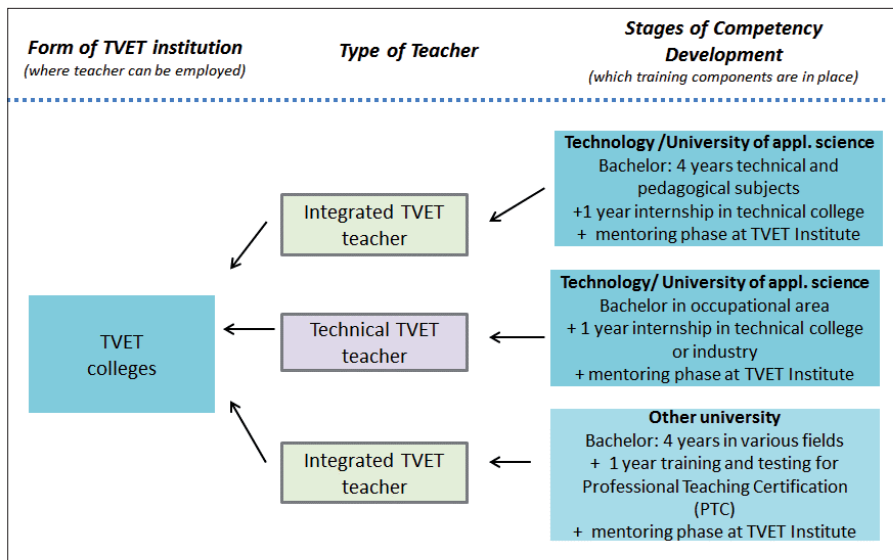


Figure 13: Thailand

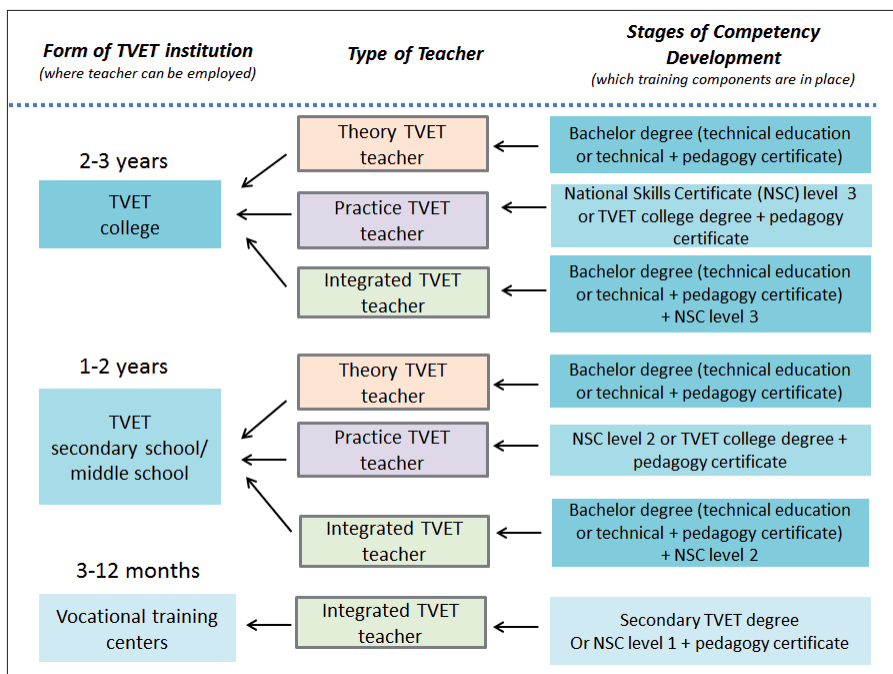


Figure 14: Vietnam

3.4.4 Standards and regulations

With regard to setting standards and regulations, the range between the countries is extremely broad. There are no recognised national standards in Cambodia (although developed, but not implemented) and Myanmar while there are highly elaborated ones on the national level in Thailand (although not specifically for TVET teachers) and Vietnam. In Lao PDR there are blueprints which are partly applied but not binding.

Those standards in use in Thailand and Vietnam are defined in general terms on the national level. On the implementation level they need to be put into operational terms by those who are in charge for the day-to-day realization in the TVET institutions.

Standards in Thailand primarily cover the design of pre-service training and provide a core curriculum. Those in Vietnam are concerned with the accreditation of vocational colleges and competencies of teachers.

3.4.5 Recruitment

Enrolments in teacher training programmes follow different procedures in the various countries. For Cambodia, a needs assessment on the national level leads to a fixed number of study places which are then filled by candidates according to specific selection criteria. Those who graduate will be assured a position in a TVET school.

In contrast, study places in Lao PDR are advertised. Applications are collected by a central body and then sent to TVET schools. Schools along with provincial authorities then choose candidates who, with the approval of the ministry department, take up and complete the training programme. After graduation the candidates go back to the school which has chosen them beforehand. In Thailand, the Ministry of Education issues a centralised recruitment announcement for TVET teachers. After a competitive examination process, the selected candidates will be announced according to the score and rank. The high score candidates are offered opportunities to select the desired colleges (in Thailand TVET schools are called “colleges”) first and become civil servants. For the other types of teacher (government employees and contract TVET teacher), colleges can do the selection according to their needs.

Formal requirements for being employed by a school also vary from country to country. Thailand follows a strict selection process with a number of criteria. Vietnam counts primarily on the formal degree of the training programme; similar to Cambodia where different school level require different training programme degrees. In Lao PDR no such regulation exists. However, teachers are required to be certified at least one level higher than the course they will be teaching at the TVET school.

Promotion for a higher position in a TVET school is mostly regulated on the school level. An elaborated system is applied in Vietnam where teaching staff of the department can propose candidates for promotion, while the final decision is then taken on higher levels.

There is no explicit positive discrimination reported from one of the countries. On the contrary, Myanmar states that homosexuals, foreigners and disabled persons are not to be employed as technical teachers.

3.4.6 Career development paths

Apart from Thailand, distinguishing levels of professional expertise and correspondingly creating an attractive pathway for a career in one of the TVET institutions is not yet part of the promotion system. In Thailand there is a professional career path with three levels: (1) New teachers will be appointed as “qualified TVET teacher professional level” after two years of pre-service training. (2) Promotion to “senior professional level” after completing in-service training programmes. (3) Promotion opportunities considered due to proven achievements including academic papers on innovation in teaching and learning processes.

Missing career development paths increase the risk of qualified TVET teachers being poached by industry as is occasionally mentioned in literature. If engaged teachers do not find an attractive future in their school or college, they will be prone to external job offers.

3.4.7 Methods

As to the teaching methods applied in TVET training programmes, responses of the interviewees do not provide a distinct picture. All types of teaching methods

are applied. Although there is some light prevalence of teacher centred methods, other methods are also mentioned significantly. Data do not allow to interpret to what degree social desirability might have played a role in the answers.

It should also be mentioned that there is not a single best teaching approach. On the contrary, a mixture of different methods is often supposed to best serve the needs of different learners. Based on this assumption, the results can be interpreted as good news in the sense that there is some variety in the teaching behaviour.

3.4.8 Transfer

There is some awareness of the induction phase into teaching at TVET schools. However, it seems that this phase is mostly organised informally by assigning new teachers to experienced ones serving as a mentor or coach.

One exception is Vietnam with a formally structured induction phase of six months for newly appointed teachers. During this phase, new teachers are mentored by experienced teachers while participating in lessons of other teachers, developing lesson plans, giving lessons themselves, etc.

3.4.9 Good practices

'Good practice' is a term which should be used with care. It is as relative as the related term 'innovative'. What is regarded as innovative in one organisation may be common practice in others.

Within this context, there are a couple of examples which link to previously described categories. For example, Cambodia mentions a scheme allowing technical teachers to gain experiences in a company. Similar examples are reported from Thailand where a TVET college works with petrochemical companies in providing three months' workplace training to teachers. Also some ideas are put forward which provide food for thought (e.g. the idea of recruiting practitioners instead of TVET teachers with an academic background put forward from Cambodia and Lao PDR).

Instead of lessons learned some focus on necessary improvements (e.g. the development of teacher standards put forward by Myanmar).

3.5 School managers

3.5.1 Institutions offering training programmes for school managers

The recruitment and training of school managers is organised and decided either on the national level by the responsible ministry or on the regional level by the respective provincial authorities. Again, practices are highly diverse in the five countries. In some countries (e. g. Myanmar, Thailand), responsibilities lie with ministries on the national level. In Cambodia, the Ministry of Labour is in charge of recruitment of management

for TVET schools while the recruitment of management for high schools is done at the provincial level. Similar structures apply in Vietnam. In Lao PDR, both the Ministry of Education and the provincial authorities are responsible for the appointment and promotion of TVET school managers.

3.5.2 Standards and regulations

In general, there are no specific formal standards for TVET school managers in place. In Thailand, the authorities draw on general standards which apply for all teachers. However, in some countries it is indicated that the personality of the candidate is as important as the ability to master the factual part of the task profile. Personality might be linked to different characteristics. While Vietnam mentions attributes such as “moral virtue”, in Lao PDR the promotion of school managers “is highly based on the political ideology and performance of the party member in line with the party agenda”.

3.5.3 Recruitment

Recruitment of school managers often follows procedures of internal promotion (e.g. Cambodia, Lao PDR). From Myanmar it is reported that also external candidates can be considered (e.g. candidates from industry)

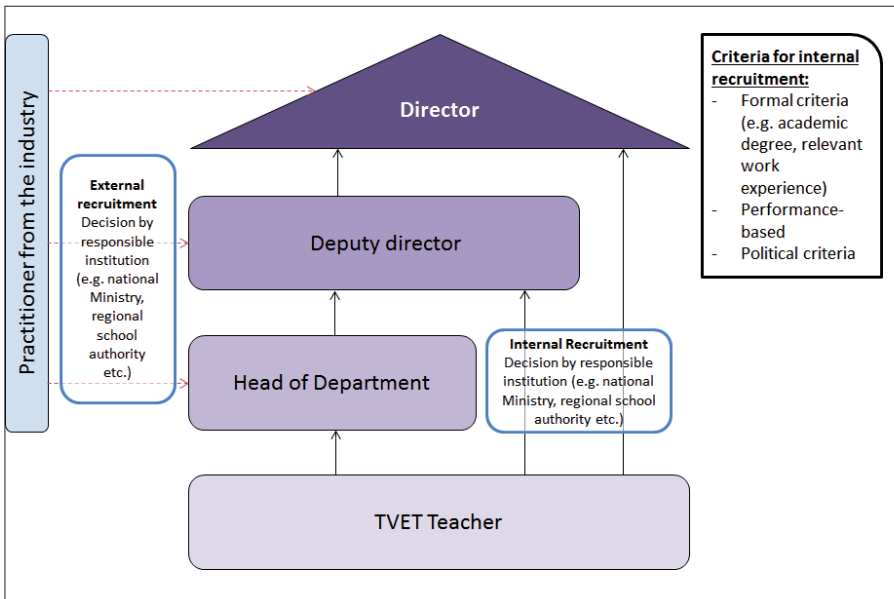


Figure 15: TVET school management recruitment pathways

In the various countries diverse criteria are considered with different weight. For example, Thailand puts a strong focus on formal criteria (e.g. academic degree, relevant work experiences). Cambodia relies on an academic degree plus school

experiences. Others rely more on the record of past performance (e.g. Lao PDR). There can also be non-job related criteria such as party membership playing a role (e.g. in Lao PDR).

Responsibility for promotion on to the management level is also not clearly defined. Often candidates are first suggested by the school board, but then need approval by the provincial or central government (e.g. Cambodia, Lao PDR). Other countries (e.g. Thailand) drive the recruitment process centrally.

3.5.4 Programmes

While there is a structured training programme or at least a variety of courses for TVET school managers available in countries such as Cambodia or Thailand, such an offering is missing in other countries. It is worth mentioning that in Myanmar the GIZ offered a school management programme.

Participation in programmes or course offerings is not reported to be compulsory.

3.5.5 Methods

Apart from structured programmes or courses, there are also interesting informal ways for school managers to broaden their expertise. Among others, respective ideas comprise hiring a resource person with industry experience from outside, professional learning communities, workshops for sharing experiences and challenges. However, responses of the interviews suggest that there are many ideas and recommendations but less established experiences and practices.

These ideas provide promising approaches which could serve as cornerstones for building concepts to support the work of school managers.

3.5.6 Good practices

Experiences and clues of good practices with regard to school managers are even scarcer as they are for the development of TVET teachers. The only explicit reference to 'good practices' is the GIZ school management programme. Overall, one can summarise the status quo in the area of TVET school manager development as follows: It is regarded to be an important area, but it is also regarded one which needs more awareness and conceptual drive.

3.6 In-company trainers

3.6.1 Institutions offering training programmes for company trainers

So far, the training of trainers is regarded as a responsibility of companies. For interpretation, one has to take into account that companies are not extensively involved in the provision of TVET programmes at all. If such programmes became

dual or cooperative (in the sense that training takes place at two learning venues: the school and the company), the issue of competency development of in-company-trainers would have to be put higher on the agenda of TVET reforms.

In any case it seems obvious that companies need some support in developing their training staff. Both Myanmar with an employers' association (Union of Myanmar Federation of Chambers of Commerce and Industry) and Thailand with a government institution (Bureau of Personnel Competency Development, BPCD) provide examples on how to organise such support. In a regional programme, GIZ supported the development of a *Standard for In-Company Trainers in ASEAN Countries* that is already applied partially in 8 different ASEAN Member States. In a first step, more than 40 Master Trainers have already been trained in the last two years from Vietnam, Cambodia, Myanmar, Lao PDR, the Philippines, Indonesia and Malaysia.

3.6.2 Programmes

Some countries (e. g. Lao PDR, Myanmar) have started to develop courses or programmes providing opportunities for company trainers to acquire relevant competencies. In some countries these courses are confined to selected areas (e. g. Vietnam with a 40h teaching skills training programme for trainers in rural areas). The most advanced programmes are offered in Thailand with a 30h and an 80h programme addressing training roles in the delivery and management of training.

3.6.3 Standards and regulations

Apart from Thailand, there are no standards and regulations in place. The 30h curriculum is certified and in line with the standard of the Department of Skill Development, Ministry of Labour. The 80h curriculum is adapted from the Standard for In-Company Trainers in ASEAN Countries and certified by BPCD.

3.6.4 Recruitment

As the appointment of trainers is regarded to be in the sole responsibility of companies, company-specific recruitment procedures apply. There is no obvious pattern to refer to. One example from Toyota in Lao PDR indicates that their TVET trainers are expected to be on a higher certificate level (in that case level 3 out of 4).

3.6.5 Methods

Similar to the current practice with school managers, the introduction of informal ways of competency development seems quite promising. In practice, there are hardly any established experiences. Interviewees mention just a few examples such as networking between companies, knowledge sharing seminars and workshops, and online communities. Again, these seem to be ideas to be elaborated rather than established practices. Overall, these areas seem to be at their very early stages.

3.6.6 Good practices

Not surprising, there are just a few experiences in multinational companies (e. g. Toyota and RMA in Lao PDR). Thailand, with two curricula for training courses mentioned above could provide a starting point to catch implementation experiences and ways for dissemination.

There are also some reported cases from specific economic sectors. For example, in Vietnam 17 in-company trainers of six wastewater companies have received three years of intensive further training and passed in 2017 the final proficiency examination oriented to the German standard of "Sewerage Engineering Technicians". German experts of the Dresden Sewage Company (SEED Dresden) and the Pirna Vocational Training Centre of Technology and Economy conducted the training. The equivalence to the German standard regarding the quality and the procedure of the training, including examination and evaluation and therefore also in occupational competence has been certified by the *Chamber of Industry and Commerce Dresden* (IHK Dresden). During 11 training sessions, the in-company trainers consolidated their professional knowledge and acquired pedagogical skills.

Interviewees in Lao PDR express the need for developing standards for in-company trainers in collaboration with companies. In addition, there is a need to train master trainers serving as multipliers in their company or organisation covering both professional and pedagogical aspects.

4. Overall appraisal

This study provides a comparative analysis of the current state of TVET personnel development in five ASEAN countries. Beyond, it proves existing assumptions and critical findings derived from a literature review. The study strives for identifying patterns but also exploring differences and promising areas for taking further action.

The following conclusions refer back to the key questions stated in chapter 1.2. With regard to these questions, the main findings and conclusions will be presented. Finally, some major recommendations anchored in the analysis will be presented and put up for further discussion.

4.1 Conclusions

4.1.1 Relevance of TVET personnel development

In the countries investigated, TVET is primarily regarded as an instrument for promoting economic development. Some statements in the responses also emphasise potential positive impact of TVET on social integration and on dealing with societal problems such as poverty, violence and conflicts.

The literature review resulted in broad support for the proposition that TVET personnel development is one of the major parameters for quality improvement in TVET. Analyses of the expert responses from five countries reinforce this view. There is a widespread awareness especially in politics on the importance of TVET personnel development for the further advancement of TVET and the objectives it is supposed to promote.

4.1.2 Types of TVET personnel

TVET personnel is often described by distinguishing the role set of TVET teachers, TVET school managers and TVET in-company trainers. By far the largest and most considered role is the one of TVET teachers. Here, further distinctions such as theory, practice or integrated teacher are introduced. Sometimes distinctions refer to the kind of vocational context (e. g. internships, work preparation programmes, apprenticeships) and assign specific role sets (e. g. instructor, supervisor, teacher, tutor, and coach).

In the countries investigated there are several ways of differentiating and naming TVET personnel. While the broader distinction of teachers, school managers and in-company trainers can be kept up, especially TVET teachers go under different headings (e. g. junior – senior teachers; theory – practice – integrative teachers). Apart from that, the employment status sometimes leads to distinctions which express some hierarchy in the teaching force. For example, teachers can be employed as civil servants, government employees or contract teachers.

With regard to TVET school managers, there is a mixture of hierarchical and functional differentiation. At least in larger institutions besides the school director and the deputy director, there are heads of division, departments, sections, or the like. Different functions lead to different responsibilities and corresponding requirements which are not yet reflected in respective development programmes.

As there are many overlapping activities between the different roles of teachers, school managers or in-company trainers, a competency profile might provide a better foundation for defining functions and core areas. One such profile is suggested in chapter 2.1.2.

4.1.3 Typical forms of training: TVET teachers

Overall, there is a remarkable diversity between TVET teacher training programmes in the various countries. Ultimate responsibility for the pre-service programmes lies with the national government. In most cases, the Ministry of Education (or the like) and / or the Ministry of Labour (or the like) are responsible for the programmes. TVET is positioned on different levels in the ministries, indicating the status and power TVET enjoys. Some ministries have assigned institutes within their area of responsibility; some cooperate closely with institutes at universities. Responsibilities mainly cover curriculum development and certification, in some cases also quality assurance. The latter can raise some questions, if there is no clear separation of roles and specific bodies may be suspected to control themselves.

Pre-service programmes also differ in terms of their sequential structure. They are either consecutive or concurrent. Implementation takes place at universities or colleges. All programmes schedule some exposure to educational practice. In addition, some of them arrange for opportunities of vocational practice in a company.

Also degrees differ in type and denomination, partly due to the duration of the programme. With regard to standards, differences exist in the various countries. While there are no national standards in some countries, there are highly elaborated ones in others. Standards on the national level are mostly defined in general terms and often need to be put into operational terms by the implementing universities or colleges. The GIZ-RECOTVET programme jointly with SEAMEO VOTTECH facilitated an initiative to develop a regional TVET Teacher Standard between 2015 – 2017. Some ASEAN Member States are currently in the referencing phase or prepare to update their national TVET Teacher standards.

Enrolment in pre-service teacher training programmes follows different procedures in the countries investigated. Also formal requirements for being employed by a school vary from country to country. There is some awareness of the induction phase for newly recruited teachers at TVET schools. Although this phase is often organised informally, it seems to be common at many schools.

In-service programmes for TVET teachers are comparatively less elaborated in most countries. Many follow a modularised structure. Courses in that area are less formalised, many do not lead to certificates. Often schools are involved in the design and operation of the courses.

Promotion for higher positions in a TVET school is mostly regulated at the school level. Apart from one country, distinguishing levels of professional expertise and correspondingly creating an attractive pathway for a career in one of the TVET institutions is not yet part of the promotion system. Missing career development paths increase the risk of qualified TVET teachers being poached by industry as is occasionally mentioned in literature. This gives reason to believe that attractiveness of teaching jobs as compared to jobs outside of schools can be improved.

Positive discrimination is only moderately encouraged in some countries, while it is missing in others. In one country it is stated that homosexuals, foreigners and disabled persons are not to be employed as teachers.

4.1.4 Typical forms of training: TVET school managers

Recruitment and training of school managers is organised either on the national level by the responsible ministry or on the regional level by the respective provincial authorities. Formal standards are largely missing. This might at least partly be due to the fact that components of the candidates' personality which are difficult to formalise play an important role.

Procedures for selecting and deciding on candidates are based on different criteria. While some countries outweigh formal ones (e. g. academic degree), others rely more on performance records or expect specific attitudes or beliefs.

There are hardly any structured programmes for the induction of school managers. However, in some countries there are individual courses which can be attended prior or parallel to the management job. Apart from such formal offerings, there are also informal learning opportunities to improve the job performance.

4.1.5 Typical forms of training: TVET in-company trainers

Overall, one can state that this area is still in its early infancy stages. Basically, both the appointment and training of in-company trainers lies in the responsibility of companies. As formal TVET programmes within companies are less common in many countries, this area is widely neglected. If the commitment of companies for TVET was to be increased, the training of trainers would require more awareness and support.

Support can derive from governmental initiatives or interest groups such as employers' associations or the like. There are a few examples which may be built on and extended. More than formal programmes, organising informal ways of competency development seem to be promising.

4.1.6 Demand for qualified TVET personnel and challenges for meeting the demand

There is broad consensus that the demand of qualified TVET personnel will increase over the coming years. The appraisal follows the assumption that the demand of qualified labour to be trained in TVET programmes will also increase considerably. Apart from the quantitative perspective, interviewees also emphasise the need that along with the quantitative view there has to be correspondingly a focus on qualitative issues as well.

In order to meet the increasing demand, a couple of challenges have to be addressed. The literature review revealed a number of critical issues which found support in the empirical part of the study. Among others, these are:

- Weak link between vocational theory and practice as exposure to practice is still marginal in most TVET training programmes. So relevance of the TVET teacher training curricula is limited.
- Quality of learning processes, learning material and assessment methods could be further improved.
- Due to missing career development paths, attractiveness of working in the TVET area is often compromised.
- Working conditions for TVET personnel, status and reputation as opposed to academic education are worse.

4.1.7 Good practices

So called 'good practices' may serve as food for thought when existing practices are to be improved. 'Good practices' are always context-sensitive. Usually they cannot be just copied from A to B but need adaptation from the original into the new context. The following example may illustrate this (Euler 2013, 13): Several years ago in South Korea a system of shared financing was introduced to increase the number of in-company training positions. Companies with more than 300 employees that provided fewer training positions than the percentage specified by the government were forced to pay a relatively high training levy. The number of training positions increased considerably as a result of this. When the government reduced the amount of the training levy, the number of training positions available fell again (Bosch, Charest 2006, 8). It would seem an obvious step to carry these experiences over into the German vocational training system. However, such a proposal would quickly be met with a number of objections in Germany, preventing it from being adopted in its entirety.

Despite these limitations, 'good practices' may still provide inspiring reference points for triggering off own ideas and concepts. When overlooking the practices reported by the interviewees from five countries, material does not seem to be extremely rich. And given the conditions of transfer outlined above, each example has to be understood and examined in order to potentially benefit from it.

4.2 Recommendations

The comparative analysis shows a remarkably high degree of diversity between the practices of TVET personnel development among the five countries. This partly reflects the different political, economic, cultural and societal contexts these countries face. In particular, the level of economic development is different; so not surprisingly the elaboration of TVET and subsequently the development of TVET personnel need different approaches.

Given this diversity, next steps and priorities for improvement will also vary between the countries. Thus, any recommendations will most likely be of different relevance for different countries. Therefore, the following recommendations should be perceived as some core factors based on the previous analysis which might be put to consideration.

Relevance and structure of TVET personnel development

- From the demand side, TVET personnel development is clearly high on the agenda for the promotion of TVET. If relevance is approached from the supply side, attractiveness for working in a TVET school or taking responsibilities as an in-company-trainer could still be improved considerably.
- As the acceptance of specific degree course models for TVET teachers is low among the target group in most countries, alternatives such as consecutive models or the recruitment of practitioners should be considered. These could provide people from the business and educational sector with the skills they need in order to meet current and future demand for TVET teaching staff.
- One pre-requisite towards boosting the attractiveness would be to define standards (as reference framework) for teaching and management positions at TVET schools on a level where these positions are perceived as professional occupations. Although such standards do not need to be harmonised in all aspects for all countries, there should at least be some consensus on minimal requirements a TVET teacher or school manager at a certain level is going to meet.
- Standards should ideally be defined in terms of competency profiles. It is worth considering that the overall system of TVET personnel development is structured in levels that build on each other. This would also allow some permeability between different roles and functions.
- Within such a competency framework, it would also be easier to define career development paths which are currently missing in most countries. Such career paths are of major importance for increasing the attractiveness of becoming TVET teachers.

Programmes for TVET teachers

- Procedures and corresponding responsibilities for curriculum development should be considered in terms of relevance and adaptability of the curriculum. Relevance is concerned with catching present challenges a prospective TVET teacher faces at TVET schools (e. g. dealing with heterogeneous groups of learners) and problems students are to tackle at work after completing their training. Adaptability addresses the need to keep the curriculum open for developments and changes in actual production requirements at various levels of industry which in the area of TVET happen more often than in general education.
- In order to develop curricula meeting the two criteria, two approaches might be considered. Firstly, both school and company practitioners should be involved adequately in curriculum development processes. Secondly, curricula should not regulate every detail but confine themselves to setting standards in core elements and leave room to schools for extensions and additions according to changing circumstances. The freedom for schools would be accompanied by reporting or quality assurance mechanisms binding schools to provide information on how they used their discretion.
- Part of the core curriculum should be a considerable exposure to both educational and vocational practice. Implementation may vary, but part of the exposure should include phases of reflection and connecting back to vocational and pedagogical theory.
- In order to meet the current and future demand of TVET teaching staff it makes sense to develop consecutive qualification models.
- Permeability of TVET teacher qualification programmes should be ensured and recognition of prior learning should be integrated into career development paths of TVET teaching staff.

Programmes for TVET school managers

- Structured ways of competency development for TVET school managers are rare exceptions. In medium term, the following two developments could be headed for.
- Essential competencies in the area of administration, quality management, team leadership, etc. should be offered in a set of modularised courses. Among others, the Thailand experiences can be taken as a starting point but most likely require extensions based on needs analysis conducted in all countries. The modularised structure would allow using the courses flexibly for different target-groups (e. g. school director, department heads) and countries.
- Structured and facilitated opportunities of informal competency development should be available for school managers already in office. They could

be organised as professional learning communities and aim at sharing experiences, discussing common challenges and sometimes entering in joint projects. Again, existing ideas and suggestions can be taken up and conceptualised on a national or regional basis.

Development of in-company trainers

- Competency development is even more in its initial stages than structured offerings for school managers. Strategies to go ahead resemble those for school managers. However, companies and employer's associations need to be much more involved.
- Professionalization of in-company trainers corresponds with the responsibilities of industry and economic branches to contribute to the promotion of TVET. Any attempts to promote TVET personnel development with regard to companies will inevitably depend on developments on this general level.

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Annex 1: Interview guidelines

Questions with regard to TVET teachers / pre-service programmes

1. Which institutions take responsibilities in pre-service teacher training programmes?
(Please outline the chain of responsibility reaching from the government, ministries to universities / colleges / schools in charge of teacher training, etc.; consider different ministries responsibility for teacher training in different vocational areas)
2. What type of TVET teachers are employed at TVET schools?
3. Which institutions are in charge of curriculum development, certification and quality assurance with regard to pre-service programmes?
(This question highlights one important element in teacher training explicitly)
4. Are there standards and regulations to assure the quality of pre-service teacher training? If so: What impact do these standards have on practice of teacher training and quality?
(Please state the respective document(s) and its key areas of regulation; provide an appraisal of the impact from the various stakeholders perspectives)
5. Are there competency models or respective standards embracing the major areas of professional teacher expertise? If so: What impact do these models have for designing and conducting teacher training programmes?
(If available, please state existing competency models or similar foundations for teacher training curricula)
6. Are there any structured pre-service programmes for the training and development of TVET teachers? Which institutions are offering such programmes?
(If so, please state respective programme(s) with duration, key objectives / content, eligibility criteria, etc.)
7. To what extent are students in pre-service TVET programmes exposed to
 - (a) vocational practice (e.g. internship in a company)
 - (b) educational practice (e.g. internship in a TVET school in pre-service programmes)
(Please note duration, objectives, organization, etc.)
8. Which formal requirements does a TVET teacher have to fulfil to be employed at a TVET school?
(Please note required degrees, personal pre-requisites, competencies, etc.)
9. How are TVET teachers recruited
 - (a) for enrolling in an appropriate pre-service teacher training programme
 - (b) at a TVET school after completion of a teacher training programme

(c) for a position of an experienced TVET teacher?

Is there any positive discrimination to attract specific target groups along criteria such as gender, ethnic origin, etc.?

(Please note common practices and relevance for each category)

10. What *competency areas* are primarily taught in pre-service teacher training programmes?

Please note roughly the time share for the following categories (overall: 100%):

(a) Technical competencies with regard to vocational discipline _____%

(b) Didactic competencies with regard to practical teaching _____%

(c) Pedagogical competencies (e.g. on psychology, learning strategies) _____%

(d) Others: _____%

11. What *teaching methods* are primarily applied in pre-service teacher training programmes?

Please note roughly the time share for the following categories (overall: 100%):

(a) Presentation of content (lecture style) _____%

(b) Interactive student-teacher exchange (dialogue style) _____%

(c) Self-organised learning by students or in groups _____%

(d) Others: _____%

12. How is assured that the newly acquired competencies are transferred into practice (e.g. induction phase at school for beginners, mentoring for unexperienced teachers)?

(As the transfer of knowledge is a burning issue in any academic programme, this question needs special consideration. Is the transfer left to the teachers, or is it supported by personal or organizational provisions?)

13. Are there any pilot models / innovative approaches which could be regarded as good practices or promising concepts for the further advancement of the pre-service teacher training system?

(Please describe the top or top-2 models)

14. From past experiences, what lessons learned should be considered for future endeavors in the development of TVET teachers?

15. From various stakeholder perspectives: What are the most urging challenges to be addressed in pre-service TVET teacher training?

Questions with regard to TVET teachers / in-service programmes

1. Which institutions take responsibilities in in-service teacher training programmes?

(Please outline the chain of responsibility reaching from the government, ministries to universities / colleges / schools in charge of teacher training, etc.; consider different ministries respon

2. sibility for teacher training in different vocational areas)

3. Which institutions are in charge of curriculum development, certification and quality assurance with regard to in-service programmes?
(This question highlights one important element in teacher training explicitly)
4. Are there standards and regulations to assure the quality of in-service teacher training? If so: What impact do these standards have on practice of teacher training and quality?
(Please state the respective document(s) and its key areas of regulation; provide an appraisal of the impact from the various stakeholders perspectives)
4. Are there any structured in-service programmes for the training and development of TVET teachers? Which institutions are offering such programmes?
(If so, please state respective programme(s) with duration, key objectives / content, eligibility criteria, etc.)
5. To what extent are students in in-service TVET programmes exposed to vocational practice (e.g. internship in a company)
(Please note duration, objectives, organization, etc.)
6. What *competency areas* are primarily taught in in-service teacher training programmes?
Please note roughly the time share for the following categories (overall: 100%):

(a) Technical competencies with regard to vocational discipline	_____%
(b) Didactic competencies with regard to practical teaching	_____%
(c) Pedagogical competencies (e.g. on psychology, learning strategies)	_____%
(d) Others: _____	_____%
7. What *teaching methods* are primarily applied in in-service teacher training programmes?
Please note roughly the time share for the following categories (overall: 100%):

(a) Presentation of content (lecture style)	_____%
(b) Interactive student-teacher exchange (dialogue style)	_____%
(c) Self-organised learning by students or in groups	_____%
(d) Others: _____	_____%
8. How is assured that the newly acquired competencies are transferred into practice?
(As the transfer of knowledge is a burning issue in any academic programme, this questions needs special consideration. Is the transfer left to the teachers, or is it supported by personal or organizational provisions?)
9. How is safeguarded that TVET teachers can keep up with continuous changes and innovations in the vocational areas of their students?
10. What support can the teaching staff draw on (e.g. sharing of teaching material, professional learning communities, etc.)?
(If available, please specify support teaching staff can draw on at the workplace at school; please appraise the spread of any such support provisions)

11. Are there any pilot models / innovative approaches which could be regarded as good practices or promising concepts for the further advancement of the in-service teacher training system?
(Please describe the top or top-2 models)
12. From various stakeholder perspectives: What are the most urging challenges to be addressed in in-service TVET teacher training?

Questions with regard to TVET school managers

1. Apart from the school headmaster: Which management roles are in place at TVET schools?
2. Which institutions take responsibilities for the recruitment and training of TVET school managers?
(Please outline the responsibility on the local / national level)
3. How are TVET school managers recruited (e.g. internal promotion)?
(Please note common practices; also address who is responsible for the recruitment or promotion of school managers)
4. Do any standards and regulations address the training of TVET school managers? If so: What impact do these standards have on the recruitment and promotion of TVET school managers?
(Please state the respective document(s) and its key areas of regulation; provide an appraisal of the impact from the various stakeholders perspectives)
5. Are there any structured programmes for the training and development of TVET school managers? Which institutions are offering such programmes?
(If so, please state respective programme(s) with duration, key objectives / content, eligibility criteria, etc.)
6. Which formal requirements does a TVET school manager have to fulfil to serve at a TVET school?
(Please note required degrees, personal pre-requisites, competencies, etc.)
7. What support can TVET school managers draw on (e.g. professional learning communities, etc.)?
(If available, please specify support school managers can draw on at school; please appraise the spread of any such support provisions)
8. Are there any pilot models / innovative approaches which could be regarded as good practices or promising concepts for the development of TVET school managers?
(Please describe the top or top-2 models)

9. From past experiences, what lessons learned should be considered for future endeavors in the development of TVET school managers?
10. From perspectives of the stakeholders interviewed: What are the most urging challenges to be addressed in the development of TVET school managers?

Questions with regard to in-company-trainers

1. What type of organizations employs TVET trainers?
(Please state what type of company employs specific TVET trainers. Are there further institutions such as training centers or the like which offer positions for TVET trainers?)
2. Are there any structured programmes for the training of TVET trainers?
Which institutions are offering such programmes?
(If so, please state respective programme(s) with duration, key objectives / content, eligibility criteria, etc.)
3. Which institutions take responsibilities in training of trainer (ToT) programmes?
(Please outline the responsibility on the state and company level)
4. Are there standards and regulations to assure the quality of ToT programmes? If so: What impact do these standards have on practice of ToT programmes and quality?
(Please state the respective document(s) and its key areas of regulation; provide an appraisal of the impact from the various stakeholders perspectives)
5. Are there competency models outlining the major areas of professional trainer expertise? If so: What impact do these models have for designing and conducting ToT programmes?
(If available, please state existing competency models or similar foundations for ToT curricula)
6. Which formal requirements does a TVET trainer have to fulfill for serving as a trainer in a company or a training center?
(Please note required degrees, personal pre-requisites, competencies, etc.)
7. How are changes in the environment of companies (e.g. technological innovations) with an impact on the objectives / content of training captured and trigger off initiatives of further education?
8. What support can TVET trainers draw on (e.g. professional learning communities)?
(If available, please specify support TVET trainers can draw on at the workplace; please appraise the spread of any such support provisions)

9. Are there any pilot models / innovative approaches which could be regarded as good practices or promising concepts for the development of TVET trainers?
(Please describe the top or top-2 models)
10. From past experiences, what lessons learned should be considered for future endeavors in the development of TVET trainers?
11. From various stakeholder perspectives: What are the most urging challenges to be addressed in the development of TVET trainers?

Questions with regard to contextual factors

1. How is the demand of qualified TVET personnel going to develop in a 3-5 years perspective?
(Please summarise existing findings and / or appraisals of relevant stakeholders with regard to TVET teachers, TVET school managers and TVET trainers. If no exact evidence is available, provide indications for each group along a continuum with „strong decrease – decrease – unaltered – increase – strong increase“)
2. How is the teacher – student ratio at TVET schools compared to the one in primary and secondary schools?
(Please provide existing figures, if available. It is less important to list exact figures but to get a valid comparison with other types of schools. If no exact evidence is available, provide indications along a continuum with „Comparison teacher-student ratio TVET schools vs. general schools: advantageous for general schools – roughly the same – advantageous for TVET schools“)
3. How are *working-conditions* of TVET teachers / trainers / school managers compared to those of teachers in general schools and / or employees outside the educational system with similar qualifications?
(Working conditions comprise components such as: working hours, degree of autonomy, work satisfaction, appreciation). Please provide for the three groups a conclusive appraisal along a continuum with „Considerably worse – worse – similar – better – considerably better“)
4. How are *incentives* of TVET teachers / trainers / school managers compared to those of teachers in general schools and / or employees outside the educational system with similar qualifications?
(Incentives comprise components such as: salary, career pathways, development and promotion opportunities, career guidance). Please provide for the three groups a conclusive appraisal along a continuum with „Considerably worse – worse – similar – better – considerably better“)

5. How are TVET schools resourced in terms of facilities, manpower and material infrastructure compared to general schools?
(Factors to be considered could be: building, learning material such as textbooks or learning assignments for conducting classes on a level up to the profession, staff such as mentors, master teachers etc. for providing inhouse support, etc. Please provide a conclusive appraisal along a continuum with „Considerably worse – worse – similar – better – considerably better“)

6. How is the status and reputation of
 - (a) TVET compared to general and/or academic education
 - (b) TVET personnel compared to teachers in general schools
 (Please provide a conclusive appraisal for both factors along a continuum with „Considerably worse – worse – similar – better – considerably better“. If stakeholders express different perspective, please make them visible)

Questions with regard to TVET objectives

1. What economic, societal, cultural objectives is TVET supposed to promote?
(Please state existing statements outlining the key objectives TVET is related to. Such objectives can be economic advancement, social integration, personal development, etc. Also note to what extent TVET personnel is part of the narrative when objectives are outlined and discussed)

2. Is there a broader awareness in politics, society and economy of the need to improve the development of TVET personnel?
(Please provide a conclusive appraisal along a continuum with „very low – low – modest – high – very high“. If stakeholders express different perspectives, please make them visible.)

Annex 2: Country-by-country reporting of the main findings

This annex provides the details of the empirical investigation. Each distinctive category of the framework of investigation will be explored in three steps:

- Reference to the guiding question(s) of the interview guidelines (see annex 1).
- Substance and gist of the responses of the interviewees.
- Synopsis catching the key findings, similarities and differences.

Objectives and relevance of TVET development

Normative anchorage – Guiding question: What economic, societal, cultural objectives is TVET supposed to promote?	
Cambodia	TVET helps creating more jobs and thus reduces poverty.
Lao PDR	TVET as an instrument for achieving stable economic growth and meeting demand for skilled labour in fundamental industries. TVET is part of the socio-economic development plan.
Myanmar	TVET is embedded in a set of economic and social objectives: <ul style="list-style-type: none"> • making younger generation more employable; • promoting (technical) skills; • providing local and foreign companies with skilled labour; • improving income and employment opportunities for young people which contributes their social integration and reduces potential conflicts; • developing small medium enterprises (SME).
Thailand	Focus on economic objectives: “produce qualified workforce to facilitate national development goals on enhancing competitiveness and innovative economy and society”.
Vietnam	TVET as an important factor for Human Resource Development and thus for socio-economic development. Some marginal references to non-economic perspectives which are equally relevant for other educational levels (e.g. “possess professional ethics and good health, gain creative ability”). There is also a hint that TVET should promote a transition into higher education programmes.

Synopsis:

- TVET primarily regarded as an instrument for promoting economic development.
- Some statements also emphasise potential positive impacts on social integration and on dealing with societal problems such as poverty, violence and conflicts.

Awareness on relevance of TVET personnel development – Guiding question:

Is there a broader awareness in politics, society and economy of the need to improve the development of TVET personnel?

(Continuum with „very low – low – modest – high – very high“)

Cambodia	Very high.
Lao PDR	Very high.
Myanmar	Controversial statements from different interviewees. Some vote for “very high”, some mention that in general public and parts of politics awareness is lacking. Others point out that awareness is very high but promotion is low.
Thailand	Very high as TVET personnel development is regarded as a main approach for TVET improvement.
Vietnam	Very high.

Synopsis:

- Statements primarily address the awareness of the need to improve the development of TVET personnel in *politics*.
- In sum, a widespread awareness on the importance of TVET personnel development for the further advancement of TVET in general is recognised – which does not necessarily mean that adequate action is taken to transform political plans into practice.

Conditions**Demand of qualified TVET personnel – Guiding question:**

How is the demand of qualified TVET personnel going to develop in a 3-5 years perspective?

(Continuum with „strong decrease – decrease – unaltered – increase – strong increase“)

Cambodia	Six out of nine respondents express “strong increase”, three state “increase” especially for TVET teachers and school managers.
Lao PDR	“Increase” assumed, some respondents provide numbers based on existing plans.
Myanmar	“Strong increase” with particular emphasis on TVET <i>trainers</i> .
Thailand	“Increase” with particular emphasis on the integration of occupational standards and pedagogical quality (competencies to facilitate more interactive learning processes with work-based learning responded to the demand of industries)
Vietnam	Respondents point to a “decrease” in the number of training institutions but do not explicitly address the level of TVET personnel.

Synopsis:

- Broad appraisal that the demand of qualified TVET personnel will increase.
- The appraisal often follows the assumption that the demand of qualified labour to be trained in TVET programmes will also increase considerably.
- Thailand respondents also emphasise qualitative aspects of TVET personnel development in the area of pedagogy.

Status, attractiveness, resourcing of TVET – Guiding questions (addressing different indicators):

- (a) How is the *teacher-student-ratio* at TVET schools compared to the one in primary and secondary schools?
- (b) How are *working-conditions* of TVET teachers / trainers / school managers (e. g. working hours, degree of autonomy, work satisfaction, appreciation) compared to those of teachers in general schools and / or employees outside the educational system with similar qualifications?
- (c) How are *incentives* of TVET teachers / trainers / school manager compared to those of teachers in general schools and / or employees outside the educational system with similar qualifications?
- (d) How are TVET schools resourced in terms of facilities, manpower and material infrastructure compared to general schools?
- (e) How is the status and reputation of TVET / TVET personnel compared to general and/or academic education?

Cambodia	Overall, comparison of TVET personnel and teachers in general schools is not favourable for the former. Especially TVET teachers have to work comparatively more, earn less and perceive less appreciation, reputation and status. However, TVET schools are reported to be better resourced in terms of facilities and learning materials.
Lao PDR	Working conditions (including incentives) of TVET personnel (teachers, school managers and trainers) are better than those for teachers at general schools. Resourcing in terms of facilities, manpower and learning materials as well as student-teacher-ratio is better at TVET schools as opposed to secondary schools. Reputation of TVET is reported to be lower than academic education, but similar to general education.
Myanmar	Working conditions especially of TVET teachers are reported to be similar than those of teachers in general education. However, working conditions for general teachers do not seem to be unattractive (in terms of working hours, degree of autonomy, work satisfaction, appreciation). Status of TVET personnel is similar to teachers in general education but lower than personnel in academic programmes. With regard to resourcing of technical facilities and learning materials, some respondents identify considerable problems.

<p>Thailand</p>	<p>Working conditions of TVET personnel are different from that of those in general schools and others. They have to work harder and more hours than those in secondary and others. That is not only jobs according to their roles and responsibilities as teachers. But they have to work closely with industries for finding their needs and seeking cooperation for TVET quality improvement. Furthermore, community services are important roles of TVET institutions. Therefore, they have to spend time planning and having students learn outside of the institution through various community service activities.</p> <p>If TVET teachers and school managers are government officers they have a safe job. Compared to teachers and managers in general education, TVET personnel have more prestige “because the education level is higher and the institutions are called ‘college’ not school”.</p> <p>TVET institutions are actually provided with more resources in terms of facilities, equipment, manpower, materials and infrastructures than general schools.</p> <p>As to the status and reputation of TVET, there is no unanimous appraisal with regard to general education. There are statements for all three possible appraisals (better, equal, worse). With regard to academic education, TVET is supposed to be second choice.</p>
<p>Vietnam</p>	<p>Overall, working conditions, incentives and resourcing are reported to be similar between TVET and general education institutions. Incentives are better outside the educational system.</p> <p>Status and reputation of TVET is unanimously reported to be worse compared to general and academic education. “The choice for TVET is the ‘last’ one for the graduates of upper secondary schools and their families, in spite of several campaigns to raise the TVET image”.</p>

Synopsis:

- Overall, the situation of TVET personnel is described in different colours. For all interviewees there is no doubt that TVET as opposed to academic education is second choice. This has major implications especially on the reputation, status and attractiveness of both TVET programmes and TVET personnel.
- Compared to personnel in general education, again statements are different but lead to a consistent overall picture. In terms of working conditions, requirements towards TVET are perceived as more demanding. But often extra work is compensated with monetary or other incentives.
- Reputation and status is more or less similar, but resourcing of TVET is reported to be better in many cases.

TVET personnel**Guiding questions:**

What type of TVET teachers are employed at TVET schools?

Apart from the school headmaster: Which management roles are in place at TVET schools?

Cambodia	<p>Pre-service training programmes are provided on two levels: (1) Junior technical instructors (this level requires diploma or associate degree for admission); (2) senior technical instructors (this level requires bachelor degree for admission).</p> <p>At TVET schools there are permanent TVET teachers (public servant under the responsibility of the MoLVT) and contracted TVET teachers (under responsibility of the school).</p> <p>On the management level there are school headmaster (director), deputy directors (responsible for respective division / faculty), and heads of division / deans of faculty.</p>
Lao PDR	<p>At TVET schools there is a distinction between theory and practical teachers.</p> <p>On the management level, school headmasters are distinguished from school managers.</p>

<p>Myanmar</p>	<p>Myanmar TVET teachers are mostly technical teachers teaching both theory and practice, except TVET teachers under DTNET/MoE who teach mostly theory due to the lack of adequate technical TOT training and workshop facilities.</p> <p>On the management level, there are school headmasters, vice-principals, heads of departments for student, academic and administrative affairs.</p>
<p>Thailand</p>	<p>There are three types of TVET teachers: (1) TVET teachers as civil servants; (2) Government employees as TVET teachers; (3) Contract TVET teachers. All three types are able to teach both theoretical knowledge and practical skills.</p> <p>On the management level, apart from the director (school headmaster) there is a management team in charge of responsibilities such as administration, cooperation with external stakeholders, student affairs, etc.</p>
<p>Vietnam</p>	<p>There are three types of teachers: theory, practice and integrated teachers.</p> <p>On the management level, there is a distinction between school, department and section management.</p>

Synopsis:

- In the various countries there are different practices of differentiating TVET personnel. There is a broad categorization of TVET teachers, TVET school managers and In-Company-Trainers.
- As to TVET teachers, there are some differences, often with underlying hierarchical connotations. For one, TVET programmes serve different target groups with different degrees (e. g. junior vs. senior technical instructor). A common distinction at TVET schools is the discrimination of theory, practice and integrative teachers. Finally, in some countries there is an employment hierarchy discriminating teachers employed as civil servants, as government employees and as contracted teachers.
- With regard to TVET school managers, there is often a mixture of hierarchical and functional differentiation. Top leadership is exercised by a school director (syn.: headmaster, principal), often represented by a deputy director. At least larger schools have heads of division, departments, sections or the like, sometimes specified by responsibilities in defined areas.
- 'In-Company-Trainers' is mostly used as an umbrella term for those in charge of internal TVET activities. It is fair to say that TVET in companies has been a marginally developed area. Consequently, this group has not had the opportunity to develop a distinguished identity. Differences used in countries with long-standing TVET systems are not in place yet.

TVET teachers: Pre- / In-Service Training

Institutions designing training programmes for TVET teachers

<p>Institutional responsibilities – Guiding questions: Which institutions take responsibilities in pre-service and in-service teacher training programmes? Which institutions are in charge of curriculum development, certification and quality assurance with regard to pre-service and in-service programmes?</p>	
<p>Cambodia</p>	<p>Responsibility for pre-service teacher training programmes is split between Ministry of Labour and Vocational Training (MoLVT) (teachers trained for 39 TVET institutes/schools under MoLVT) and the Ministry of Education, Youth and Sport (MoEYS) (teachers trained for six high schools/institutes across six provinces, and two more schools in other two provinces to come soon).</p> <p>Responsibilities for in-service teacher training lies with the TVET school. They can draw on some offerings provided by the MoLVT and MoEYS.</p> <p>Both ministries have associated institutes (National Technical Training Institute (NTTI) for the MoLVT and the National Institute of Education (NIE) for the MoEYS which are in charge of curriculum development, certification and quality assurance for the pre-service teacher programmes under their jurisdiction. With regard to in-service programmes, there are no similar regulations and standards.</p>
<p>Lao PDR</p>	<p>Responsibility for pre- and in-service teacher training is in a phase of transition. In the past, there were some specialised TVET institutions (mainly colleges) offering programmes in areas such as Hotel and Tourism, Construction and Agriculture, Automotive and Electric, Accounting, Mining, etc. “In the very near future”, the Vocational Education Development Institute (VEDI) at Faculty of Engineering of the National University of Lao PDR will be responsible for both pre- and in-service teacher training.</p> <p>VEDI will then be in charge of curriculum development and certification. Quality assurance is overseen by the Education Quality Assurance Center (EQAC) which was established by the Ministry of Education and Sports. Since 2011, EQAC has developed quality standards, assessment procedures and guidelines for TVET.</p>

<p>Myanmar</p>	<p>There is no nationwide holistic TVET teacher-training programme or institution. All 13 ministries with some responsibilities in TVET organise their specific teacher training programmes. For example, the Ministry of Industry offers technical in-service trainings in their six Industrial Training Centers. Some of the teacher training institutions are private, some were established by international donors. Ministry of Education is mandated as a leading TVET ministry with nationwide training facilities at a technical TVET teachers training centre but only focusing the TOT training programmes.</p> <p>Following this highly decentralised structure, curriculum development and certification is also under the auspices of the different ministries and their training institutions. Curricula as well as certificates are not standardised.</p> <p>Not surprising, there is also no coordinated quality assurance in place. Some critical comments point to the commercial thrust especially in the private training institutions.</p>
<p>Thailand</p>	<p>Responsibilities for pre- and in-service teacher training programmes lie with the Office of the Vocational Education Commission (OVEC) at the Ministry of Education. Programmes are implemented mostly in TVET colleges.</p> <p>Curricula for pre-service programmes are developed by the Office of the Teacher Civil Service Commission and Educational Personnel Commission (OTPEC) in accordance with standards of the Thai Teacher Council. In-service programmes are at least partly demand driven: The needs of TVET teachers are gathered and transformed into respective offerings.</p> <p>Certificates are issued by the Bureau of Personnel Competency Development (BPCD) as part of OVEC in cooperation with TVET colleges.</p> <p>The standards and procedures of operation are established. The quality assurance is overseen by both organisations according to their mandates.</p>

<p>Vietnam</p>	<p>The Ministry of Education and Training (MoET) is responsible for all university level programmes including the pre-service teacher training programmes at six universities. The Ministry of Labour, Invalids and Social Affairs (MoLISA) is responsible for in-service teacher training programmes. These programmes are offered by universities and departments for Vocational Pedagogy at colleges.</p> <p>Responsibility for the curriculum framework of pre-service programmes is taken by the MoET. The universities develop their specific curriculum on the basis of the framework. Correspondingly, the MoLISA is in charge for in-service programmes for technical skills and pedagogy certificates. MoLISA defines the curriculum for vocational pedagogy training programmes and certifies them.</p> <p>MoLISA also defines and manages the national occupational skills standard and develops the upgrading training programme for vocational teachers in different occupations on the basis of this standard.</p> <p>The same structure applies for certification and quality assurance. The ministries define standards while the universities / colleges implement those in their programmes.</p>
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Synopsis:

- Responsibility for pre-service programmes lies with a ministry, in most cases either with the Ministry of Education or with the Ministry of Labour / Industry (or similar denominations). An exception is Myanmar, where some 13 ministries are involved in providing respective programmes. The importance of TVET can be interpreted from the position within the responsible ministry: Is TVET positioned as an own department high in the hierarchy or is it just part of a larger department with less power and resources?
- Ministries cooperate with institutes in charge for curriculum development, certification and sometimes quality assurance. Those institutes are either associated to the ministry (e. g. in Thailand) or are part of a university (e. g. in Lao PDR).
- While curriculum development and certification is widely organised and regulated, quality assurance is still at a side table. Questionable is the fact that quality assurance in all cases reported is not separated from those units which are in charge of the activities to be monitored. As a consequence, the basic principle of division of power is not guaranteed.
- In-service programmes are less elaborated in most countries. While some countries report one or another program offered by the ministry, others mention that schools are involved in the planning and operation of such programmes.

Types of programmes

Programme profiles – Guiding questions:

Are there any structured pre-service programmes for the training and development of TVET teachers? Which institutions are offering such programmes?

To what extent are students in pre-service TVET programmes exposed to (a) vocational practice (e.g. internship in a company); (b) educational practice (e.g. internship in a TVET school in pre-service programmes)?

What competency areas are primarily taught in pre-service teacher training programmes? Please note roughly the time share for technical, didactic, pedagogical competencies (overall: 100%)

<p>Cambodia</p>	<p>Pre-service programmes build on prior studies in the technical domain (consecutive structure) and take 10-12 months to complete, out of which 2-3 months are exposed to educational practice. There are two types of programmes with different admission requirements. Junior programme requires associate degree / diploma, the senior programme a bachelor degree.</p> <p>In-service programmes are offered on demand. Currently, there are 2-3 trainings with 60-80 participants each, conducted by NTTI in collaboration with MoLVT's Department of Training.</p> <p>As the pre-service programmes follow technical studies in a specific domain, they are almost completely focused on didactic and pedagogical competencies. In-service trainings primarily focus on technical skills.</p>
<p>Lao PDR</p>	<p>Now the Vocational Education Development Institute (VEDI) is offering all pre- and in-service programmes for TVET teachers. Interviewees point to the challenges VEDI is facing in taking those responsibilities due to lack of professional teacher trainers, facilities, equipment, etc. Basically, there are two different programmes both lasting two years: (1) one for graduates with Diploma degree from technical or vocational institutions leading to Higher Diploma / Higher Diploma Continuous Degree; (2) one for students with Higher Diploma qualifications leading to Bachelor Degree.</p> <p>Both vocational and educational practice is a compulsory part of the programmes. Students spend 12 weeks of vocational practice during school vacation. At the end of the internship, students are assessed by the company supervisor on real work assignments. Educational practice is organised as a 16 week internship in the last semester of the programme. At the end of this period, students are assessed by a joint committee from VEDI and related institution on the ability to deliver theory and practice to their students.</p> <p>Pre-service programmes are concurrent and cover both technical and pedagogical competencies. The interviewees gave different details on the time share but kept their estimates within a similar range:</p> <ul style="list-style-type: none"> 50-60% Technical competencies 13-20% Didactic competencies 13-20% Pedagogical competencies 10-15% Social/general competencies

Myanmar	<p>As there is no nationwide structure for TVET teacher training, existing offerings do not follow a structured format. However, there are various short-term courses of 4-10 weeks duration which focus on technical competencies in mechanical, electrical, civil or electronic domains. In addition to that there are some specific trainings provided by development agencies such as the ADB or the GIZ. For example, a teaching methodology training for 200 master teachers and multipliers was offered in 2016.</p>
Thailand	<p>Pre-service programmes for TVET teachers are offered in the first two-years by BPCD in cooperation with colleges. In-service courses vary by needs of new national policy and also changes of new knowledge and technologies.</p> <p>Educational practice is integrated in the pre-service programmes. Vocational practice is not part of the programmes, but it can be included after the internal assessment.</p> <p>Pre-service programmes build on the Teacher Standard. These stipulate about 60% for professional skills, 30% for teaching development and 10% for improving management skills.</p>
Vietnam	<p>Pre-service teacher training follows a consecutive model. After four years students first gain a Bachelor degree in a technical discipline. Afterwards they are trained in vocational pedagogy in a designated programme which grants the Vocational Pedagogy Certificate. In-service courses can focus on occupational skills training and/or pedagogy.</p> <p>Within the pre-service programmes, there is an educational internship of 4 weeks and vocational practice making up about 25% of the overall duration of the programme. Vocational practice consists of practice training in the university workshop and an internship in a company lasting about two months.</p> <p>Within the programme, about 90% are devoted to the development of technical competencies while the remaining 10% cover didactic competencies.</p>

Synopsis:

- There are basically two types of programmes: (1) consecutive programmes (Cambodia, Vietnam) with first the technical training and second the pedagogical training, each completed with a degree; (2) concurrent programme (Lao PDR, Thailand) with technical and pedagogical studies in parallel. Myanmar currently offers courses without a coherent programme frame.
- Implementation of the pre-service programmes is carried out at universities or colleges. All programmes schedule some exposure to educational practice, lasting between one and four months (integrated in programmes of different durations between 10 months and 2 years). Lao PDR and Vietnam also schedule some exposure to vocational practice, while this component is missing in Thailand and Cambodia. Vietnam devotes 25% of the programme duration for technical training at university workshops and company.
- Degrees awarded also differ in type and denomination, partly due to the duration of the programme. For example, Lao PDR grants a higher diploma degree for its two-year programme. Bachelor degrees are granted within different contexts. Within concurrent programmes in Lao PDR and Thailand after two years, within a consecutive programme in Cambodia after 10-12 months.
- In-service programmes mostly follow a modularised course structure sometimes leading to certificates.

Standards and regulations

Standards competency models – Guiding questions:

Are there standards and regulations to assure the quality of pre-service teacher training? What impact do these standards have on practice of teacher training and quality?

Are there competency models or respective standards embracing the major areas of professional teacher expertise? What impact do these models have for designing and conducting teacher training programmes?

Cambodia	Currently, NTTI follows the MoLVT's instruction to ensure the quality of pre-service teacher training. There is a Training Quality Control Board to assure the quality of teacher training. Furthermore, there is a draft of National TVET Trainer Qualification Framework (CTQF).
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<p>Lao PDR</p>	<p>As yet, there are no recognised national quality standards or regulations for TVET teacher training. In 2013, the GIZ had supported the development of standards for pre-service TVET teacher training at bachelor level. Within an ADB funded project (STVET), a manual has been developed which introduces a model with defined levels of qualifications. Some interviewees indicate that this model serves as a frame for the development of National Competency Standards for Teacher-Trainer Qualifications with regard to pedagogical competencies. So far, there is no officially recognised NQF.</p> <p>Overall, standard setting seems to be still in the introductory stages.</p>
<p>Myanmar</p>	<p>As yet neither standards nor competency models in place. Training courses are designed along the methodology of competency based courses but also lack any overarching anchorage in frameworks or the like.</p>
<p>Thailand</p>	<p>The Teacher and Educational Personnel Act (2004) provides rules and regulations for the design of pre-service trainings and specifies the career paths for teachers and school managers. Based on the standards defined by OTPEC (see 3.4.1), a core curriculum for pre-service training was developed. Colleges can adjust and specify the core curriculum according to given circumstances.</p> <p>While on the national level there is a kind of strategic control, monitoring and supervision, on the operational level standards and regulation provide a general framework which has to be detailed and put into concrete terms.</p>

<p>Vietnam</p>	<p>On the institutional level there are Quality Accreditation Standards for university stipulated by the MoET and “Regulations on Criteria and Standard Systems for Accreditation of Vocational Colleges”/ “Intermediate Qualification Schools” promulgated by the MoLISA. Based on these accreditation standards, the educational institutions define specific quality standards with regard to personnel, curriculum, facility, etc. Accredited institutions are supposed to have a good reputation and brand.</p> <p>On the programme level there is the national TVET teachers standard. It covers three major areas: Professional competencies (e. g. technical competencies, foreign language, ICT); pedagogical competencies (e. g. planning, conduct and assessment of teaching and learning); career development / scientific research. This standard is reported to be an important basis for designing and conducting specific training programmes.</p>
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Synopsis:

- With regard to setting of standards and regulations, the range between the countries is extremely broad. There are no recognised national standards in Myanmar while there are highly elaborated ones on the national level in Thailand and Vietnam. In Lao PDR there are blueprints which are partly applied but not binding.
- Those standards in use in Thailand and Vietnam are defined in general terms on the national level. On the implementation level they need to be put into operational terms by those who are in charge for the day-to-day realization.
- Standards in Thailand primarily cover the design of pre-service training and provide a core curriculum. Those in Vietnam are concerned with the accreditation of vocational colleges and competencies of teachers.

Recruitment

Recruitment of TVET teachers / promotion at TVET schools – Guiding questions:

How are TVET teachers recruited (a) for enrolling in an appropriate pre-service teacher training programme; (b) at a TVET school after completion of a teacher training programme; (c) for a position of an experienced TVET teacher?

Is there any positive discrimination to attract specific target groups along criteria such as gender, ethnic origin, etc.?

Which formal requirements does a TVET teacher have to fulfil to be employed at a TVET school?

Cambodia

Places in TVET teacher training programmes follow a surveyed demand in the respective schools. As a formal eligibility criterion in the consecutive teacher training programme, applicants have to provide an associate degree or a bachelor degree from the previous technical studies depending on the type of programme. Interviewees report that there is always an encouragement for both genders and disadvantaged candidates to apply for the training programme.

Successful graduates of TVET teacher training programmes are assured an adequate position as public servant teacher after completion of the programme.

Places for in-service trainings are filled according to relevance of the respective subject or content at the school.

Promotion within the TVET school is regulated by a management board in each school.

Employment requires an associate degree or bachelor degree plus the pre-service certificate for teaching in TVET schools (run by the MoLVT); and a bachelor degree plus the pre-service certificate for teaching in high schools (run by the MoEYS).

<p>Lao PDR</p>	<p>Candidates for a pre-service teacher programme apply at VEDI which will send the application to all TVET institutions. Those along with the provincial authorities select the appropriate candidates and submit their appraisal to the ministry department for approval. Approved candidates can then be enrolled in the programme.</p> <p>After completion of the teacher training programme, the graduated teachers go back to the TVET institution they were selected beforehand. Placement of new teachers is a challenge, as there is the ambition to cut on the over-employment of civil servants including teachers.</p> <p>For in-service courses announced by the VEDI, the TVET institutions can select and nominate candidates.</p> <p>Promotion to a position of an experienced teacher is mostly under the responsibility of the school. There are no national regulations to be followed.</p> <p>Formal requirements as set out by a government decree are not directly linked with a teacher training degree. Rather, the decree stipulated that the candidate must possess a certificate at least one level higher than the level of the course to be taught. Within this frame, the type of qualifications is looked at and balanced against the needs of the TVET institutions.</p>
<p>Myanmar</p>	<p>Formally, a bachelor or master degree is required for being employed at a TVET school. It is explicitly mentioned that homosexuals, foreigners and disabled persons are not to be employed as technical teachers. Some ministries mention additional employment criteria such as industrial experience, educational practice, health and fitness, ambition to teach.</p> <p>Posts at TVET schools as well as training courses are announced in newspapers and the job searching websites. There is no specific information on how a position of an experienced TVET teacher is filled.</p>

Thailand	<p>OVEC at the MoE issues a centralised recruitment announcement for TVET teachers. After a competitive examination process, the selected candidates will be announced according to the score and rank. The high score candidates are offered opportunities to select the desired colleges (in Thailand TVET schools are called “colleges”) first and become civil servants. For the other types of teacher (government employees and contract TVET teacher), colleges can do the selection according to their needs.</p> <p>Recruitment criteria are as follows: Thai nationality; at least 18 years of age; bachelor degree; professional General Teacher License certified by Thai Teacher Council; other official regulations such as faith in democracy, no political position, not being a monk or a priest, good health, etc.</p> <p>In-service trainings can be conducted for all types of TVET teachers. Courses are selected according to the teachers’ subjects and performance. Respective programmes are offered without gender, age and religion restrictions.</p> <p>TVET teachers to be appointed for a higher position need to show empirical experiences such as an academic research or teaching innovation and in-service trainings.</p>
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<p>Vietnam</p>	<p>For enrolling in an appropriate pre-service teacher training programme, there are no formal recruitment procedures. Posts at TVET schools are advertised. The applicants are assessed according to the selection criteria via interview, written and teaching tests.</p> <p>Selection of teachers for in-service training courses is regulated within the school. The departments suggest certain teachers and the school management decides on the allocation to respective courses.</p> <p>Best teachers are selected by the teaching staff of the department. They are nominated for promotion bottom-up. Decision for posts in the department is taken by school management while posts in the school leadership are decided by the school owner (e. g. line ministry).</p> <p>There is no discrimination for or against specific target groups.</p> <p>Formal requirements depend on the school level that teachers are recruited for: (1) College: teachers need to have a bachelor degree or above; (2) Intermediate Qualification school: theory and integrated teachers need at least a bachelor degree, practice teachers need to have a skills certificate; (3) Primary / Basic Qualification training center: teachers need to have intermediate qualification or a skills certificate.</p>
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Synopsis:

- Enrolment in teacher training programmes follows different procedures in the various countries. For Cambodia, demand assessment leads to a fixed number of study places which are then filled according to specific selection criteria. Those who graduate will be assured a position in a TVET school.

In contrast, study places are advertised in Lao PDR. Applications are collected by a central body and then sent to TVET schools. Schools choose candidates along with provincial authorities who with the approval of the ministry department take up and complete the training programme. After graduation candidates go back to the school which has chosen them beforehand.

- Formal requirements for being employed by a school also vary from country to country. Thailand follows a strict selection process with a number of criteria. Vietnam counts primarily on the formal degree of the training programme. Similar to Cambodia where different school levels require different training programme degrees. In Lao PDR there is no such regulation; instead the rule that a teacher must possess a certificate at least one level higher than the course to be taught at TVET school.
- Promotion for higher positions in a TVET school is mostly regulated on the school level. An elaborated system is applied in Vietnam where teaching staff of the department can propose candidates while decisions on the candidates are then taken on higher levels.
- There is no explicit positive discrimination reported from one of the countries. On contrast, for Myanmar it is stated that gays, foreigners and disabled persons are not to be employed as technical teachers.

Career development paths

<p>Career pathways – Guiding question: How are career pathways, development and promotion opportunities of TVET teachers compared to those of teachers in general schools and / or employees outside the educational system with similar qualifications? (Continuum with „considerably worse – worse – similar – better – considerably better“)?</p>	
Cambodia	No explicit career pathways.
Lao PDR	Better, due to income generation. No explicit career pathways.
Myanmar	No systematic career pathways. However, it is mentioned that promotion opportunities at High Schools are better than in other schools.
Thailand	<p>There is a professional career development with three levels: (1) New teacher will be appointed as a “qualified TVET teacher professional level” after two years of pre-service training. (2) Promotion to “senior professional level” after completing in-service training programmes. (3) Promotion from “Senior professional level” to “expert”.</p> <p>In each level the promotion opportunities will be considered due to proven achievements including academic papers on innovation in teaching and learning processes and in-service training programmes.</p>
Vietnam	<p>Compared to teachers in general schools: similar Compared to employees outside the educational system: worse</p>
<p>Synopsis:</p> <ul style="list-style-type: none"> • Apart from Thailand, distinguishing levels of professional expertise and correspondingly creating an attractive pathway for a career in one of the TVET institutions is yet to be a part of the promotion system. • There may be a link to the poaching of qualified TVET teachers by industry which is occasionally mentioned in literature. If engaged teachers don't find an attractive future in their school or college, they will be prone to job offers coming in from outside. 	

Methods

<p>Teaching methods – Guiding question: What teaching methods are primarily applied in pre-service teacher training programmes? Please note roughly the time share for the following categories (overall: 100%): (a) Presentation of content (lecture style) (b) Interactive student-teacher exchange (dialogue style) (c) Self-organised learning by students or in groups (d) Others</p>									
Cambodia	<p>Interviewees provide contradicting statements. While some mention an emphasis on presentation, others see a priority on student-centred approaches.</p>								
Lao PDR	<p>Interviewees also provide different appraisals but the given ranges in their statements indicate some direction:</p> <table border="0"> <tr> <td>(a) Presentation of content (lecture style)</td> <td>30-54%</td> </tr> <tr> <td>(b) Interactive student-teacher exchange (dialogue style)</td> <td>20-35%</td> </tr> <tr> <td>(c) Self-organised learning by students or in groups</td> <td>12-30%</td> </tr> <tr> <td>(d) Others:</td> <td>5-15%</td> </tr> </table>	(a) Presentation of content (lecture style)	30-54%	(b) Interactive student-teacher exchange (dialogue style)	20-35%	(c) Self-organised learning by students or in groups	12-30%	(d) Others:	5-15%
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Myanmar	<p>Interviewees also provide different appraisals. Here the ranges expressed show a high dispersion among the interviewees with higher scores on interactive and self-organised methods:</p> <table border="0"> <tr> <td>(a) Presentation of content (lecture style)</td> <td>10-30%</td> </tr> <tr> <td>(b) Interactive student-teacher exchange (dialogue style)</td> <td>20-60%</td> </tr> <tr> <td>(c) Self-organised learning by students or in groups</td> <td>10-50%</td> </tr> <tr> <td>(d) Others:</td> <td>10-40%</td> </tr> </table>	(a) Presentation of content (lecture style)	10-30%	(b) Interactive student-teacher exchange (dialogue style)	20-60%	(c) Self-organised learning by students or in groups	10-50%	(d) Others:	10-40%
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Thailand	<p>There is no clear direction in the statements of the interviewees. All methods are mentioned without a clear statement on the share.</p> <table border="0"> <tr> <td>(a) Presentation of content (lecture style)</td> <td>40-50%</td> </tr> <tr> <td>(b) Interactive student-teacher exchange (dialogue style)</td> <td>20-30%</td> </tr> <tr> <td>(c) Self-organised learning by students or in groups</td> <td>20-30%</td> </tr> <tr> <td>(d) Others:</td> <td>10-20%</td> </tr> </table>	(a) Presentation of content (lecture style)	40-50%	(b) Interactive student-teacher exchange (dialogue style)	20-30%	(c) Self-organised learning by students or in groups	20-30%	(d) Others:	10-20%
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(c) Self-organised learning by students or in groups	20-30%								
(d) Others:	10-20%								
Vietnam	<p>Interviewees provide different appraisals but the given ranges in their statements indicate a clear direction: (college level)</p> <table border="0"> <tr> <td>(a) Presentation of content (lecture style)</td> <td>65-80%</td> </tr> <tr> <td>(b) Interactive student-teacher exchange (dialogue style)</td> <td>10-20%</td> </tr> <tr> <td>(c) Self-organised learning by students or in groups</td> <td>5-15%</td> </tr> </table>	(a) Presentation of content (lecture style)	65-80%	(b) Interactive student-teacher exchange (dialogue style)	10-20%	(c) Self-organised learning by students or in groups	5-15%		
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Synopsis:

- As to the teaching methods applied in TVET training programmes, responses of the interviewees do not provide a distinct picture. As there is supposed to be a high diversity with regard to different subjects, teaching preferences and habits, appraisals are based on subjective calculations. Social desirability might also play a role in the answers.
- It should also be mentioned that there is not one best teaching approach. On contrast, a mixture of different methods is often supposed to best serve the needs of different learners. Based on this assumption, the results can be interpreted as good news in the sense that there is some variety in the teaching behaviour.

Transfer

Application of knowledge into practice – Guiding question: How is assured that the newly acquired competencies are transferred into practice (e.g. induction phase at school for beginners, mentoring for unexperienced teachers)?	
Cambodia	Most interviewees do not express a view. There is one statement mentioning that new teachers are assigned to experienced teachers for one year before they can really do their own teaching.
Lao PDR	Some interviewees also mention that experienced teachers are assigned to serve as a mentor or coach for newly hired teachers.
Myanmar	Apart from also running a coaching and mentoring approach, one interviewee mentions the role of a three month probation period. During this phase junior teachers are supervised by experienced teachers.
Thailand	Interviewees do not address the induction phase of new teachers. Instead two interviewees mention that some colleges encourage their teachers to obtain work experience and update their technical competencies in a company.
Vietnam	There is an induction phase of at least six months for newly recruited teachers. During this phase, they are mentored by experienced teachers in participating in lessons of other teachers, developing lesson plans, giving lessons themselves, etc.

Synopsis:

- There is some awareness of the induction phase into teaching at TVET schools. However, it seems that this phase is mostly organised informally by assigned new teachers to experienced ones serving as a mentor or coach.
- One exception is Vietnam, where there is a formally structured induction phase of six months for newly appointed teachers.

Good practices**Show cases and lessons learned – Guiding questions:**

Are there any pilot models / innovative approaches which could be regarded as good practices or promising concepts for the further advancement of the pre-service teacher training system?

From past experiences, what lessons learned should be considered for future endeavors in the development of TVET teachers?

Cambodia	<p>No specific reference to pilot models. Interviewees emphasize the need to implement strict internal rules and regulations (e. g. 15 times absence in the class in one semester leads to dismissal; assessment rules).</p> <p>For in-service teachers, a so-called “Return Industrial Scheme” is planned. It would allow technical teachers to gain experiences in a private company.</p> <p>There are controversial views on whether TVET teachers should have an academic background or be recruited as practitioners. Others prefer to strengthen cooperation with SMEs for making teacher training more practical.</p>
Lao PDR	<p>The existing concept of teacher training is regarded to be well defined, although training delivery could be improved. Lao-German Technical College in collaboration with Toyota has set up a structured internship programme of 12 weeks duration for final year TVET students based on the standard Toyota training modules.</p> <p>As to lessons learned, emphasis is put on the target groups for teacher training. There is support for recruiting TVET graduates as TVET teacher students, and one statement even argues that “outstanding TVET graduates should be promoted to become TVET teachers”. One interviewee expresses the need to have an officially recognised NQF.</p>

<p>Myanmar</p>	<p>No references to <i>conceptual</i> approaches which could be considered for transfer into other countries. Consideration of innovative approaches is more on a micro-level (e. g. coaching by experienced teachers).</p> <p>Similar perspectives are taken in describing lessons learned. For example, one interviewee recommends “to use better visual aids” or “not to praise the trainers too much to avoid over-confidence”. Others point to missing components in teacher trainings (ranging from units on fire safety or first aid to gaining industrial experience).</p> <p>The Ministry of Industry regards the development of teacher standards and quality assurance as an urgent issue.</p>
<p>Thailand</p>	<p>Two pilot models are outlined:</p> <p>(1) Bureau of Personnel Competency Development (BPCD) has developed a curriculum for improving teaching professional skills in the field of industrial mechanics for newly graduated teachers. It helps teachers to be confident in training their students. This course is supposed to be a model for other colleges to apply in their trainings.</p> <p>(2) The Maptaphut College works with six petrochemical companies in providing three months’ workplace training to teachers. After the training, TVET teachers can develop a curriculum with a teaching plan and deliveries according to the needs of industry.</p> <p>A couple of issues are highlighted as both lessons learned and suggestions for further improvements. One addresses the need to let new teachers better benefit from the experiences of senior teachers especially in the induction phase. Others reinforce the importance to integrate work experience both in pre- and in-service teacher training.</p>
<p>Vietnam</p>	<p>Two different pilot training models are mentioned:</p> <p>(1) Concurrent pre-service teacher training at Institute of Engineering Pedagogy at HUST. Here technical and pedagogical training are carried out from the start of the programme.</p> <p>(2) Consecutive model for pre-service teacher training at UTE Nam Dinh and UTE Hung Yen. Here the pedagogy part starts already in the third year of studies which allows the students to link technical with the pedagogical training.</p> <p>With regard to lessons learned, there is strong support for strengthening the practical part in the training programmes (e. g. by integrating work-based skills and increasing the time for internships at vocational schools).</p>

Synopsis:

- 'Good practice' is a term as relative as 'innovative'. What is regarded as innovative in the one organization may be common practice in others.
- Within this context, there are a couple of examples which link to previously described categories (e. g. scheme to organise work experience for technical teachers). Also some ideas are put forward which provide food for thought (e. g. the idea of recruiting practitioners instead of TVET teachers with an academic background).
- Instead of lessons learned some focus on necessary improvements (e. g. the development of teacher standards).

School managers***Institutions offering training programmes for school managers*****Guiding question:**

Which institutions take responsibilities for the recruitment and training of TVET school managers?

Cambodia	The MoLVT is in charge of recruitment of management for TVET schools. The management board of the TVET school proposes the potential internal candidate to the Ministry for final approval and appointment. The recruitment of management for High Schools (schools which have technical and vocational programmes) is done at the provincial level.
Lao PDR	MoES and the provincial authorities are responsible for the appointment and promotion of TVET school managers.
Myanmar	Responsibility of Mol and MoE.
Thailand	OVEC as part of the MoE is the responsible authority in recruiting and appointing the management of vocational institutions.
Vietnam	The owner of the TVET school (e. g. line ministry, provincial government) is responsible for the recruitment of school management.

Synopsis:

- The recruitment and training of school managers is organised and decided either on the national level by the responsible ministry or on the regional level by the respective provincial authorities.

Standards and regulations**Guiding question:**

Do any standards and regulations address the training of TVET school managers?

Cambodia	No standards in place.
Lao PDR	No standards. It is pointed out that the promotion of school managers “is highly based on the political ideology and performance of the party member in line with the party agenda”.
Myanmar	No standards, although emphasis is put on the technical know-how.
Thailand	There are standards provided by the Teacher and Educational Personnel Act (last modified in 2008) and subsequent regulations and guidelines of OTPEC.
Vietnam	No explicit standards on competency of school managers. However, general requirements can be derived from the TVET Law and school regulation document: “The Principal of the vocational training middle qualification school or college must have (a) moral virtue, have at least five years’ experience of teaching or management of vocational education; (b) at least a bachelor degree (TVET college) or a master degree (college); (c) completed training courses in vocational education management; (d) attain fitness ...”.

Synopsis:

- There are no formal standards in place. However, in some countries it is indicated that the personality of the candidate is as important as the ability to master the factual part of the task profile.

Recruitment

<p>Guiding question: How are TVET school managers recruited? Which formal requirements does a TVET school manager have to fulfil to serve at a TVET school?</p>	
<p>Cambodia</p>	<p>Recruitment usually draws on internal staff of the school. The management board of the school selects a candidate and proposes him/her to the ministry for approval and appointment.</p> <p>Formal requirement: Bachelor degree plus 2-3 experience or associate degree with longer experience.</p>
<p>Lao PDR</p>	<p>No formal recruitment procedure but process of internal promotion. The promotion is “based on good performance”. The candidates selected must be at least in the position of head division and selected by the party organization of the institution. The list of potential candidates is then submitted to MoES for consideration and approval.</p> <p>TVET schools under the responsibility of the provincial government follow a similar but leave the decision to the provincial governor.</p> <p>Formal requirements on one hand correspond with those applied in the recruitment of TVET teachers. On the other hand, “it is compulsory that the TVET school manager must be a permanent member of the party and has undergone at least four months political leadership training”.</p>
<p>Myanmar</p>	<p>Recruitment follows a process of internal promotion. Within the responsibility of the MoI, there are also recruitments of school managers from industry.</p> <p>Formal requirements are not in place.</p>

Thailand	<p>Recruitment is organised by OVEC in line with the qualifications stated in the Teacher and Education Personnel Act. Candidates have to pass competitive examination and are appointed to vocational institutions according to their score.</p> <p>For the position of deputy director of TVET college the candidate has to be a teacher for at least four years, have a bachelor's degree or an equivalent and a school management license from the Teachers Council of Thailand.</p> <p>For the position of director of TVET colleges, the candidate has to be in a specialised TVET teacher position or deputy director of TVET institution for at least one year. Beyond he has to have a bachelor degree or an equivalent level as well as a school management license from the Teachers Council.</p>
Vietnam	<p>The appointment of school manager is mostly on the basis of internal promotion by the school owner. Formal requirements are outlined in chapter 3.5.2.</p>

Synopsis:

- Recruitment of school managers often follows procedures of internal promotion. From Myanmar it is reported that external candidates can be considered as well (e. g. from industry).
- In the various countries diverse criteria are considered with different weight. For example, Thailand puts a strong focus on formal criteria (e. g. academic degree, relevant work experiences). Others rely more on the record of past performance. There can also be non-job related criteria such as party membership playing a role.
- Responsibility for promotion on to the management level is not clearly defined either. Often candidates are first suggested by the school board, but then need approval by the provincial or central government.

Programmes

<p>Guiding questions: Are there any structured programmes for the training and development of TVET school managers? Which institutions are offering such programmes?</p>	
<p>Cambodia</p>	<p>Under MOEYS, “general school managers” are required to take a school management course of 15-20 days. As yet, there is no specific course for TVET school managers. The module for this is being developed.</p> <p>Under MoLVT, NTTI takes the lead in training and development of TVET school managers. School managers also have the opportunity to participate in the regional trainings or workshops.</p>
<p>Lao PDR</p>	<p>As yet, there is a lack of structured programmes for the training and development of TVET school managers. VEDI is offering some training for school managers on an ad-hoc basis.</p>
<p>Myanmar</p>	<p>There are no structured programmes for TVET school managers. However, the GIZ offered an in-service school management programme for 65 school managers and middle management personnel from MOI and MOE in 2016.</p>
<p>Thailand</p>	<p>There is a training programme for TVET school managers of 192 hours duration. The programme consists of two parts: (1) Competency Development (personal characteristics, academic leadership, and school management); (2) Analysis and report the learning outcomes.</p>
<p>Vietnam</p>	<p>No structured programmes for the training and development of school managers.</p>
<p>Synopsis:</p> <ul style="list-style-type: none"> • While there is a structured training programme or at least a variety of courses for TVET school managers available in some countries, such an offering is missing in other countries altogether. • Participation in programme or course offerings is not reported to be compulsory. 	

Methods

Guiding question: What support can TVET school managers draw on?	
Cambodia	Interviewees mention the following opportunities for school managers to broaden their expertise: (1) Hiring a resource person from outside with industrial experience (2-4 weeks). (2) Apply for scholarship to join a short course training, an exposure visit or study abroad. (3) Exchange experience, ideas, knowledge, challenges in workshops organised by the MoEYS.
Lao PDR	Statements express ideas rather than existing practice. They primarily focus on establishing professional learning communities.
Myanmar	Ideas for providing support include: workshops, regular meetings organised by concerning ministries, conferences, peer-learning and knowledge exchange.
Thailand	Obviously there are no applied measures but some ideas for improvement. One is to establish a central office with experienced members who would offer assistance and consultancy services for school managers. Another suggestion relates to building networks between TVET institution managers (e. g. "director club") for sharing experiences, knowledge and ideas.
Vietnam	School managers are offered to join workshops, meetings for sharing information and gain international experiences through study tours abroad.
Synopsis:	
<ul style="list-style-type: none"> • While programmes for school managers comprise formal arrangements of competency development, methods also include informal ways to improve the job performance. Responses of the interviews suggest that there are many ideas and recommendations but less established experiences and practices. • These ideas (e. g. workshops for sharing experiences and challenges, learning networks) provide interesting approaches which could serve as cornerstones for building concepts to support the work of school managers. 	

Good practices

<p>Guiding question: Are there any pilot models / innovative approaches which could be regarded as good practices or promising concepts for the development of TVET school managers? From past experiences, what lessons learned should be considered for future endeavours in the development of TVET school managers?</p>	
Cambodia	No pilot models or lessons learned suggested.
Lao PDR	No pilot models so far. However, there are some suggestions to improve the competency development of school managers: develop standards for school managers; introduction of pre-service courses for at least three weeks; school managers should be assessed once a year and their term in office should be restricted “to avoid anarchy or dictatorship”.
Myanmar	The GIZ school management programme is stated as a pilot model. Also, a strong need for introducing structured school management trainings is expressed.
Thailand	No pilot models and lessons learned mentioned.
Vietnam	No pilot models mentioned. It is suggested to develop a competency standard for the school manager position. Based on the standard, an appropriate training programme could be designed, developed and conducted.
<p>Synopsis:</p> <ul style="list-style-type: none"> • Development of school managers regarded as an important area with just a few experiences and conceptual suggestions (e. g. GIZ school management programme). • Needs more awareness and conceptual drive. 	

In-company trainers

Institutions offering training programmes for company trainers

Guiding question: Which institutions take responsibilities in training of trainer (ToT) programmes?	
Cambodia	Responsibility of the private sector / companies.
Lao PDR	Responsibility of the companies, potentially with support by VEDI.
Myanmar	UMFCCI (Union of Myanmar Federation of Chambers of Commerce and Industry) is a national non-governmental organization representing and safeguarding the interests of the private business sector. UMFCCI supports the business communities by sharing knowledge, expertise and opportunities. Services that the UMFCCI provides include human resource development training, seminars, workshops, and study tours of which CVT (Swiss NGO TVET training center) and MPTA (Myanmar Private TVET Association) are in close coordination initiating in-company trainings at the companies.
Thailand	Bureau of Personnel Competency Development (BPCD) as part of the MoE is the main institution responsible for the training of in-company trainers, both in terms of budget and developing human resources. A number of vocational teachers are trained to train in-company trainers.
Vietnam	None
Synopsis:	
<ul style="list-style-type: none"> • So far, the training of trainers is regarded as a responsibility of companies. However, this view is based on the assumption that companies are not extensively involved in the provision of TVET programmes at all. If such programmes became dual, the issue of competency development of in-company-trainers would have to be put up higher on the agenda of TVET reforms. • In any case it seems obvious that companies need some support in developing their training staff. Both Myanmar with an employers' association and Thailand with a government institution provide examples on how such support could be organised. 	

Programmes

<p>Guiding questions: Are there any structured programmes for the training of TVET trainers? Which institutions are offering such programmes? Are there competency models outlining the major areas of professional trainer expertise?</p>	
Cambodia	There are no structured programmes or competency models.
Lao PDR	VEDI is about to develop structured programmes. It can draw on support from GIZ which supports the establishment of the in-company training center (ICT). The ICT in collaboration with some private companies has developed some modules and is in the process of piloting the programme. Apart from these first initiatives, there are no competency models.
Myanmar	There are no structured programmes or competency models. However, GIZ's RECOTVET programme and its support to the Standard for In-Company Trainers in ASEAN provides some reference points.
Thailand	BPCD offers in-company trainer programmes on two levels: 30h- and 80h-curriculum. Both programmes include modules on training plan development, conducting training, assessment and evaluation. In addition, the 80h-curriculum covers knowledge on in-company dual vocational education management and administration.
Vietnam	There is no systematic programme for TVET in-company trainers. However, there is a 40h teaching skills training programme for the trainers in rural areas, developed in an ILO-EU project in 2010.
<p>Synopsis:</p> <ul style="list-style-type: none"> Some countries have developed courses or programmes providing opportunities for company trainers to acquire relevant competencies. The most advanced one seems to be implemented in Thailand with a differentiation of training roles in the delivery and management of training. 	

Standards and regulations

Guiding question: Are there standards and regulations to assure the quality of ToT programmes?	
Cambodia	Neither standards nor regulations.
Lao PDR	In some larger companies (e. g. Toyota) there are guidelines and rules which come close to such standards.
Myanmar	As yet no in-company trainer standard. On the UMFCCI there are some initial attempts to discuss and develop such standards.
Thailand	The 30h curriculum is certified and in line with the standard of Department of Skill Development, MoL. The 80h curriculum is adapted from the Standard for In-Company Trainers in ASEAN Countries and certified by BPCD.
Vietnam	Neither standards nor regulations.
Synopsis:	
<ul style="list-style-type: none"> • Apart from Thailand, there are no standards and regulations in place. 	

Recruitment

Guiding question: Which formal requirements does a TVET trainer have to fulfil for serving as a trainer in a company or a training centre?	
Cambodia	No formal requirements defined.
Lao PDR	Requirements are defined on the company level. For example, at Toyota TVET trainers should have certificate level 3 (Toyota has 4 levels of qualification).
Myanmar	No formal requirements in place, but often 3 years of work experience in related domains.
Thailand	No formal requirements to be assigned as TVET trainer. Often companies select a trainer from their experience and seniority.
Vietnam	No capture.
Synopsis:	
<ul style="list-style-type: none"> • As the appointment of trainers is regarded to be in the sole responsibility of companies, company-specific recruitment procedures apply. 	

Methods

Guiding question: What support can TVET trainers draw on (e.g. professional learning communities)?	
Cambodia	Personal information network, which is often not formalised. Community of practice in a particular area such as mechanic trainer.
Lao PDR	Networking between companies, trade associations and trade working groups.
Myanmar	Human capital forum (organised by UMFCCI, ADB, MoE in march 2017); knowledge sharing seminars.
Thailand	Social media and online communities are provided for in-company trainers to exchange experience and challenges.
Vietnam	No capture.
Synopsis:	
<ul style="list-style-type: none"> • Similar to the current practice with school managers, the introduction of informal ways of competency development seems quite promising. In practice, there are hardly any established experiences. This area seems to be at its very early infancy stage. 	

Good practices

Guiding questions: Are there any pilot models / innovative approaches which could be regarded as good practices or promising concepts for the development of TVET trainers? From past experiences, what lessons learned should be considered for future endeavours in the development of TVET trainers?	
Cambodia	No capture.
Lao PDR	<p>Model of in-company training of Toyota and RMA DCT. GIZ in collaboration with Lao-German Technical College and RMA (Ford City) developed a pilot Dual Cooperative Training Curriculum.</p> <p>Some interviewees express the need for developing standards for in-company trainers in collaboration with companies. Also the need to train master trainers serving as multipliers in their company or organization covering both professional and pedagogical aspects.</p>

Myanmar	Development of in-company trainers is still in its infancy stage. Some first attempts need to be consolidated and systematically extended. Overall there is a need to promote awareness for TVET, not least in companies.
Thailand	The curricula of the 30h- and 80h-trainings are fairly elaborated and may serve for transfer into other countries.
Vietnam	GIZ piloted training for trainer in the framework of their piloting the cooperative training approach in Vietnam. These trainers are mobilised in the GIZ project.
Synopsis:	
<ul style="list-style-type: none"> • Not surprising, there are just a few experiences in multinational companies. Thailand with two curricula for training courses could provide a starting point to catch implementation experiences and ways for dissemination. 	