Development of Standards for Vocational Teachers at Bachelor level in Lao PDR

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Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CBT	Curricula Based Training
CCSSO	Council of Chief State School Officers
DHE	Department of Higher Education / MoES (Lao PDR)
DTVE	Department of Technical and Vocational Education / MoES (Lao PDR)
ESDF	Education Sector Development Framework
ESDP	Education Sector Development Plan
FE	Faculty of Engoneering / NUoL (Lao PDR)
FoE	Faculty of Education / NUoL (Lao PDR)
GIZ	Gesellschaft fuer international Zusammenarbeit GmbH
HOTS	Higher Order Thinking Skills
ICT	Information and Communication Technology
ICT–CFT	Information and Communication Technology – Competency Framework for Teachers
ILO	International Labour Organization
InTASC	Interstate New Teacher Assessment and Support Consortium
IVET	Integrated Vocational Education and Training
KMK	Standing Conference of the Ministers of Education and Cultural Affairs of the Laender of the Federal Republic of Germany
Lao PDR	People's Democratic Republic of Laos
LVQF	Lao Vocational Qualification Framework
MoE	Ministry of Education (Lao PDR)
MoES	Ministry of Education and Sports (Lao PDR)
MoLISA	Ministry of Labour, Invalids, Social Affairs (SR Vietnam)
MoLSW	Ministry of Labour and Social Welfare (Lao PDR)
MPI	Ministry of Planning and Investment (Lao PDR)
NESRC	National Education System Reform Committee
NESRS	National Education System Reform Strategy
NQF	National Qualification Framework
NTC	National Training Council
NUoL	National University of Laos
NSEDP	National Socio-Economic Development Plan
PM	Prime Minister
PMO	Prime Minister's Office

QualiVET	Quality development and quality assurance with labour market reference for the VET systems in the metal sectors
RCP	Regional Co-operation Platform
SEAMEO	Southeast Asian Ministers of Education Organization
SEAMEO INNOTECH	SEAMEO Regional Center for Educational Innovation and Technology
Sida	Swedish International Development Cooperation Agency
SIREP	SEAMEO INNOTECH Regional Education Program
TDA	Training and Development Agency for Schools
TESAP	Teacher Education Strategy for 2006-2015 and the Teacher Education Action Plan for 2006-2010
TS	Technical School
TTEST	Teacher Training Enhancement and Status of Teachers Project
TT-TVET	Teacher Training for Technical and Vocational Education and Training
TVS	Technical and Vocational School
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
VEDC	Vocational Education Development Centre
VTE	Vocational Teacher Education

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0 Executive Summary

The study describes the development process of standards for vocational teachers at bachelor level in Lao PDR, based on the current situation of the national education sector. In order to emphasize the practical relevance of the study, it makes a proposal of national standards for vocational teachers at bachelor level and recommends a strategy how to implement these standards. For this, the study shows the necessity and the meaningfulness of standard development, the theoretical basis of standards, and the results and conclusions of a comparative analysis of currently existing standards, which have been incorporated into the development process. Furthermore it discusses the prerequisites for a successful implementation of the drafted standards and makes a proposal for an implementation strategy.

To achieve the greatest possible political acceptance, relevant stakeholders from the academic and the scientific area as well as representatives from the political area have been involved in the development process right from the beginning. Amongst others particularly the Ministry of Education and Sports, diverse vocational schools, the Faculty of Engineering at National University of Laos and its Departments and the Faculty of Education took part in the process of development.

Although, its economy has grown remarkably in recent years, Lao PDR is still one of the least developed countries. In 2010 the gross domestic product has grown by 8.3 % and from 2011 to 2015 an average growth of at least 8.0 % is assumed. Apart from this solely economical development, the Lao government is continuing to meet its poverty-related Millennium Development Goals to be achieved by 2015 and is striving to leave the status of being a least developed country by 2020.

One of the most challenging tasks for this ambitious timeline is the development of the Technical and Vocational Education and Training (TVET) sector. In order to provide a skillful labor force, the Government of Laos makes great efforts to reform the national education system as committed in various policy documents, like the National Education System Reform Strategy (NESRS) and the Education Sector Development Plan (ESDP). The latter has been developed by the Ministry of Education and Sports (MoES) in order to facilitate the development of the education sector in a sustainable and balanced way. Even so it has the target to harmonize all activities the ESDP itself doesn’t specify any details concerning the development or implementation of standards. Instead it contains legal regulations related to the

implementation of such standards. In most of these documents TVET is regarded as an integral and crucial part to prepare employment for the people and skilled workers for the industry. The vocational teacher training institutions are not able yet to provide a sufficient number of well-trained teachers, capable of educating the demanded workforce. Since well-trained teachers are essential for the provision of a qualified workforce the standards, developed in this study, aim for improving the quality of teacher education.

According to the Lao Educational Law, issued in 2007, the educational system consists of four main pillars, Early Childhood Education, General Education, Vocational Education and Higher Education. One of the identified key areas of the education reform is the expansion of technical schools and vocational training, because the development of this educational pillar is regarded as an integral and crucial contribution to the development of the whole country. Irrespectively of the provider of education and training, vocational education in general is subdivided into three levels, primary, middle and high, depending on the previous education and experience and the duration of the education and training measurement. At each level it is possible for students to finish their vocational education in a regular or initial way, or a continuous or linkage way, depending on their level of previous knowledge or qualification. A great number of public TVET facilities offer vocational education at schools, colleges, community learning centers and skills development centers, not forgetting numerous private schools and colleges. Together all training facilities educate more than 50,000 vocational students per year.

In order to make the certificates or degrees, awarded by various providers of education comparable, Lao PDR presently is developing a National Qualification Framework (NQF). The current draft of the NQF consists of eight different levels, each level specified by five descriptors. The lower five levels are applied for the vocational education, the levels six to eight for the academic education. For the development of standards for vocational teachers at bachelor level, equivalent to level six, the NQF is important in two different ways. First, it describes the skills, the future teachers must be able to teach within the TVET system. On the other hand it describes the skills, the future teachers have to acquire during their academic education.

In 2012 the Laotian Ministry of Education and Sports (MoES) assigned the Faculty of Engineering at the National University of Laos to develop Standards for Vocational

Teachers in Lao PDR at bachelor level in order to improve the quality of vocational teacher education. The development of standards could be achieved within the framework of the Regional Co-operation Platform (RCP), providing financial support, facilitating the cooperation between scientists from different Southeast Asian countries as well as enabling scientific consulting. This support promoted the researcher team to develop the required standards based on and embedded in a scientific study and thus to improve their acceptance significantly. Beside the legal framework and education policy the researcher team considered two further aspects in developing the required standards, the particularities of vocational education and the results of an analysis of already existing standards.

To get a deeper understanding for standards the study describes a foundation of standards for teacher education. Beginning with a general view of standards and its purposes the impacts of standard-based teacher education will be discussed. On the other hand the specific role of vocational schools and the resulting requirements of vocational teacher are elaborated. Based on the theoretical foundation of standards, five currently existing standards from England, Germany, Laos (primary and lower secondary teacher), USA and Vietnam have been analyzed. The analysis of these standards has been conducted using the following main questions, derived from the theoretical foundation: How does the formal structure of the selected standards look like? For which target group the selected standards have been developed? What is the main purpose of the selected standards? Based on the results of the analysis it has been proposed to give the standards a three-staged structure. The first stage is subdivided in five so-called ‘Areas of Competency’, each of them subdivided into specific competencies (second stage), illustrated by indicators (third stage). These standards comprehensively describe the expected knowledge, competencies, skills and attitudes a vocational teacher at bachelor level in Lao PDR has to be able to demonstrate.

The drafted standards have been aligned with two standard frameworks, the UNESCO ICT–Competency framework for Teachers and the SEAMEO INNOTECH Teaching Competency Standards in Southeast Asian Countries. Using them as benchmarks, the alignment is to ensure, that the newly drafted standards have been sufficient and comprehensive in terms of competencies for the 21st Century, ICT-competencies and regional requirements.

The standards, which have been drafted, are suitable as a basis for the development of vocational teacher curricula. They do not only highlight expressively the specific characteristics of vocational teachers, but also consider the cultural, ethical and political characteristics of Lao PDR. In this sense the research team is convinced that this study is a valuable contribution to the improvement of the country's vocational teacher education and hopes that the drafted standards stimulate the discussion in other Southeast Asian countries.

1 Introduction

1.1 Background and Problems

Although its economy has grown remarkably in recent years, Lao PDR is still one of the least developed countries. Therefore, the Lao government has set the goal to leave this status until 2020. Human resource development is the second of four main strategic development plans agreed at the IX Communist Party Congress (cp. Lao People's Revolutionary Party 2011, p. 42). There is a continuing lack of skilled workers in Lao. Therefore one of the most prominent challenges in this direction is the development of the vocational education sector, which currently doesn´t meet the requirements of the growing economy.

An important precondition for increasing the number of qualified workers is also the availability of well-trained teachers. Previous studies have shown, however, that teachers at vocational schools are not yet qualified well enough (cp. Soysouvanh et al. 2011, p. 13-27). It is therefore necessary to improve the qualifications of vocational teachers to reach the goal of providing the labor market with a sufficient amount of skilled workers. One important approach to improve the quality of education systems is to develop quality standards and to implement them.

In his speech to lecturers of the National University of Laos, held on a university meeting on 5th April 2012, Mr. Samane Viyaket, the former president of the National Assembly of Laos, emphasized the importance of improving the training of teachers for the development of Laos explicitly: "In order to develop the country, human resource has to be developed, but first teachers must be developed." Consequently, the teacher is a center to improve education quality. In addition, Teachers don't only transfer knowledge, they are people who give advice, train and suggest good things to students.

The Strategic Plan for the Development of Technical and Vocational Education and training 2006–2020 lists the numerous weaknesses and their causes for the low performance of the TVET system. Amongst others the plan describes as one important reason for the weakness of the TVET system the quality of teachers as follows: "The quality of TVET teachers remains mostly very low; teachers lack

practical experiences, because they have not been employed in companies or enterprises and/or trained in the pedagogical field before." (MoE 2007, p. 8).

Therefore, the Departments of Technical and Vocational Training (DTVE) and of Higher Education (DHE) of the Ministry of Education and Sports (MoES) highlighted amongst others the following goal considering vocational teachers, which has to be achieved until 2020: "Building up vocational teachers for different subjects (technical and pedagogical) at different levels within the country and abroad in order to provide teachers for all TVET institutions sufficiently according to their demand; upgrading teachers for technical and pedagogical subjects and upgrading TVET managers and administrative personnel continuously in order to enable them to follow the ICT development." (MoE 2007, p. 11-12).

The improvement of the quality and quantity of education of vocational teacher is important. The topic of this study is to create vocational teacher standards at bachelor level. In addition, the study has deal with implementation and evaluation of the result in order to improve the implement system in the future.

Nowadays, the initial and further education of vocational teachers in Lao PDR doesn't take place in a systematic manner. Some vocational education institutes (public and private) are permitted to conduct teacher education according to their capacity and their own needs. In this way neither the needs of the country for skilled work force can be covered, nor the living conditions of the population will be improved. (cp. Singthilath 2012, p. 2).

In order to improve the quality for Vocational Teachers the main goals of this study are:

- Firstly to develop standards of vocational teachers at bachelor level in Lao PDR.
- Secondly to describe how these standards should be implemented.

Based on the results of the study a proposal will be submitted to the Ministry of Education and Sports to get the approval of standards in order to facilitate the implementation.

To achieve these goals, the Gesellschaft fuer Internationale Zusammenarbeit (GIZ) GmbH has encouraged the efforts of the Lao partners. Particularly within the

framework of the Regional Cooperation Platform (RCP)1, GIZ has supported the research team both financially and organizationally, and thus has enabled this study in the first place.

1.2 Approach of the Study

In preparing the study, a cyclic process has been adhered. On the theoretical side, a permanent literature study and an analysis of existing standards has been done. This is done to reflect the state of scientific research. On the other hand, many stakeholders were involved in the research process. This is firstly due to use the experiences of the involved persons. And this is secondly due to strengthen the acceptance of the developed standards.

In order to gain information and to develop this research the authors used the following methods for the theoretical aspects:

The analysis of literature provided the research team with knowledge about the theoretical foundation of standards, which has to be considered in the development process. In this context five already existing national standards could be identified. These standards will be described and analyzed for their adequacy as a resource for the development of standards for vocational teachers in Lao PDR. The analysis is conducted by using specific criteria to find out which characteristics are absolutely crucial and which of the analyzed standards could serve as a role model.

For the development of standards of TVET teachers and especially to ensure the acceptance of these standards it seemed important to involve the relevant stakeholders in Lao PDR in the process right from the beginning. Because of their significance in practical, political and academic respects and because of the fact that these institutions represent either the demand or the supply side of vocational teacher education the following target group of "Lao Stakeholders" have been involved in the development process:

- Department of Technical and Vocational Education (MoES)
- Department of Higher Education (MoES)

[1] RCP is a network that serves mainly universities involved in Vocational Teacher Education (VTE) within the ASEAN region and China. Founded in 2009 by Gesellschaft fuer Internationale Zusammenarbeit (GIZ) GmbH, the platform incorporates presently VTE and Technical and Vocational Education and Training (TVET) in the region through the exchange of experiences, the development of programs and the accomplishment of common research projects. Further information available at http://www.rcp-platform.com/.

- Faculty of Education (NuoL)
- Faculty of Engineering (NUoL)
- Academic Affairs Department (NuoL)
- Civil Engineering Department (FE)
- Electrical Engineering Department (FE)
- Electronic and Communication Engineering Department (FE)
- Information Technology Department (FE)
- Mechanical Engineering Department (FE)
- Road-Bridge and Transportation Engineering Department (FE)
- Water Resource Engineering Department (FE)
- Academic Affairs Division (FE)
- Vocational Education and Development Centre
- Dongkhamxang Vocational School
- Lao-German Technical School
- Pakpasak College
- Polytechnic College
- Vientiane-Hanoi Vocational School
- Vientiane Province Vocational School

In order to learn from experiences, made by other countries respectively institutions in South East Asia and to benefit from their expertise, the following target group consisting of "Members of RCP-Platform" have been involved in the development process as well:

- IBB / Tongji University (China)
- Universitas Pendidikan Indonesia (Indonesia)
- Burapha University (Thailand)
- Rajamangala University of Technology Thanyaburi (Thailand)
- General Department of Vocational Training / Ministry of Labor – Invalids and Social Affairs (Vietnam)
- Namdinh University of Technology Education / Ministry of Labor – Invalids and Social Affairs (Vietnam)

In different stages of the research project workshops have been conducted with the involvement of the two target groups mentioned above. These workshops will be described briefly in chronological order in the following table (Fig. 1):

Fig. 1: Workshops related to the Development of Standards for Vocational Teachers

20th February 2012 **(Vientiane/Laos)**	**Ownership Workshop** • Presentation of research project and proposal • Presentation of already existing national standards, which are considered to be analyzed • Presentation of initial results considering the analysis of already existing national standards • Achievement of acceptance, ownership and support • Draft of proposal to the Ministry of Education and Sports (MoES) to get the official assignment for the development of Standards for Vocational Teachers in Lao PDR Target group: "Lao Stakeholders"
24th May 2012 **(Thalat/Laos)**	**Capacity Building Workshop** • Further training in the field of development, implementation, and evaluation of national Standards (Input: Dr. Joachim Dittrich) • Exchange of experience and expertise particularly considering the implementation of standards Target group: • "Lao Stakeholders" • "Members of RCP-Platform"
25th May 2012 **(Thalat/Laos)**	**Continuing Research Workshop** • Presentation and discussion of final results considering the analysis of already existing national standards • Presentation and discussion of the initial draft of standards • Advise and coaching by external expert (Dr. Uwe Elsholz) • Guidelines and recommendations for further development of the standards Target group: • "Lao Stakeholders" • "Members of RCP-Platform"
10th August 2012 **(Bangkok/ Thailand)**	**Presentation of Research Work (within the context of the Annual RCP Meeting)** • Presentation and discussion of the drafted standards • Comments and recommendations particularly concerning regional particularities for further development of the presented draft Target group: "Members of RCP-Platform"
18th October 2012 **(Vientiane/Laos)**	**Acceptance Workshop** • Presentation and discussion of the final draft of the standards • Recommendations for a final revision of the drafted standards • Acceptance and approval of the standards to be proposed to the Ministry of Education and Sports (MoES) in order to get the official authorization Target group: "Lao Stakeholders"

The theoretical work – the foundation of educational standards and the analysis of existing standards – and the conduction of the workshops have alternated. The results of this cyclic process are now described in this study.

1.3 Outline of the Study

This first chapter consists of the description of the problem, the main objectives and the methodological approach of the conducted inquiry.

As a basis and background for the understanding of the study the second chapter contains a description of the vocational education system of Lao PDR. The major education policies and regulations concerning the Implementation and Evaluation of Standards will be shown. In particular this chapter describes the situation concerning the qualifications of vocational teachers including its specific problems and challenges.

The third chapter comprises an examination of the foundation of standards. This includes the functions and different purposes of standards. In this chapter also the characteristics of vocational education compared to general education are presented. These characteristics concerning the role of the vocational schools compared to public schools as well as the specific skills requirements for vocational teachers. It is argued why it requires special standards for vocational teachers. At the end of this chapter questions will be shown for the analysis of existing standards.

By means of the results of the third chapter, the fourth chapter describes, compares and analyzes existing standards of teacher education. Standards for general teachers from England, Germany, Laos, USA and for vocational teacher from Vietnam will be analyzed. The results of the analysis serve as a foundation for the developed standards for vocational teacher in Lao PDR.

In order to ensure the quality of the drafted standards they have been aligned with two important standard frameworks. This alignment firstly with the “Information and Communication Technology – Competency Framework for Teachers” (ICT–CFT), first published in 2008 and updated in 2011 by UNESCO and secondly with the ‘Teaching Competency Standards in Southeast Asian Countries’, published in 2010 by SIREP (SEAMEO INNOTECH Regional Education Program) will be described in the fifth chapter.

The sixth chapter contains the result of the development process - the Standards for Vocational Teachers at bachelor level in Lao PDR.

The seventh chapter deals with the implementation of these standards. Three key elements will be proposed and justified: An appropriate dissemination of the

standards, the development of standard-based curricula, including the accomplishment of these curricula at the university, and the establishment of a concept of mentoring at the vocational schools.

The study ends with chapter eight, providing final remarks and bringing up possible future developments and needs of further research.

2 Current Situation of TVET in Laos

2.1 Structure of the TVET System

Lao PDR still belongs to the group of least developed countries despite a strongly growing economy over the last several years. In 2010 the gross domestic product has grown by 8.3 % (cp. U.S. Department of State) and from 2011 to 2015 an average growth of at least 8.0 % is assumed (cp. MPI 2010, p. 11). Apart from this solely economical development, the Lao government is continuing to meet its poverty-related Millennium Development Goals to be achieved by 2015 and is striving to leave the status of being a least developed country by 2020.

One of the most challenging tasks for this ambitious timeline is the development of the Technical Vocational Education and Training (TVET) sector. On one hand it has to absorb an increasing number of young girls and boys, who are leaving school ["population in working age (15-64 years) will increase from 3.76 million people in year 2011 to 4.10 million in 2015"(MPI 2010, p. 12)] and on the other hand this sector has to provide enterprises with the needed labor force. "In the year 2015, there will be a demand of 3.26 million workers, but the workforce supply will be only 3.17 million (including 276,828 new workers, average 55,365 workers per year)" (MPI 2010, p. 16).

The TVET sector in Lao PDR is currently not able to live up to the expectations of the labor market both on the demand and on the supply side. According to the Asian Development Bank, "The sector and labour market assessments indicate that

- TVET enrolments are declining in high-demand skill areas and where skill shortages are greatest (e.g., construction), and
- only a small proportion of companies recruit workers directly from TVET institutions and few companies have any relationship with TVET institutions" (ADB 2010a, p.5).

Furthermore, the aforementioned assessments reveal, that "employer and trade association interviews indicated a strong negative image of TVET. It was repeatedly stressed that TVET graduates at all levels have to be trained again by the economic units. The training currently being provided in TVET institutions was considered to be exclusively theoretical, and delivered by teachers (sometimes graduates from the TVET school) who do not have the necessary

work experience or real skills" (ADB 2010a, p. 4). Considering these reports it becomes all the more essential to separate the education of vocational teachers from their alma mater colleges in order to enable quality and evaluation on an academic level. Only then the vicious cycle can be interrupted where poorly trained students remain at the same college to become poorly qualified vocational teachers, who in turn insufficiently train the new generation of vocational students perpetuating the cycle.

A further difficulty is that vocational education, provided by the TVET-sector, increasingly misses the demand of the labor market. The labor market assessment identified "five major sectors of current and apparently likely continuing skills shortages" (ADB 2010b, p. 4): furniture, construction, construction sub-trades (masonry, carpentry, electrical, plumbing etc.), tourism and hospitality, mechanical maintenance and repair trades. The sobering forecast, identified by the assessment, is justified by the fact that the number of needed skilled workers (certificate level), trained by public TVET institutions, has dropped in recent years. 407 out of 13,065 students were trained in 2006/07 at certificate level, while in 2008/09 the number dropped to 68 out of 17,926. A reverse of this trend cannot be expected in the near future. On one hand, training in these trades is not attractive for young people, because it has a bad image. On the other hand, the schools are not keen on offering sufficient training, because it is too expensive, too difficult and has a bad reputation for them as well. On the contrary, Higher Diploma programs (IT, business administration etc.) have become the fastest growing component of TVET, despite an even faster growing oversupply of graduates. It can therefore be expected, that skilled workers still have to be recruited from neighboring countries, especially from Vietnam, to fill the gap.

In summary it can be stated that the TVET-sector of Lao PDR suffers from a bad image, caused by its inability to cater to labor market needs, its lack of adjusting to market demand and supply, particularly regarding the skill levels and the sectors where training is needed, and an insufficient number of vocational teachers, whose qualifications are considered less than sufficient for the market needs.

Being aware of the aforementioned insufficiencies and in its endeavor to pave the way for building a skillful labor force, the Government of Lao has made great efforts to reform the national education system as committed in the National Education System Reform Strategy (NESRS) 2006–2015. There are four key focus action areas namely (cp. MoE 2008, p. 10):

- increase the length of general education to 12 years,
- access expansion and a quality and relevance improvement program,
- implementation of the Teacher Education Strategy and Action,
- the expansion of technical schools and vocational training.

Within the framework of NESRS 2006-2015 and the Education Sector Development Plan (ESDP) 2011-2015, TVET in Lao PDR is regarded as an integral and crucial part to prepare employment by training of labor force and technicians at various levels of the economy equipped with necessary knowledge, ability, skills and attitude. This will contribute to the socio-economic development of the country, especially the 7th National Socio-Economic Development Plan (NSEDP) 2011-2015. TVET plays a crucial role to provide learning–teaching on the technical–vocational aspects in the vocational education based on the levels and courses to form Lao workforce with knowledge, skills, and attitudes necessary to accessible for working in entrepreneurship and be able to run in business by oneself as required by labour market.

Currently 21 technical and vocational schools and/or colleges under the supervision of the Ministry of Education and Sports (MoES) are in charge of providing vocational education in Lao PDR. Vocational schools under the supervision of the MoES offer vocational qualifications on different levels (Certificate, Certificate Vocational, Diploma, Higher Diploma and Higher Diploma Continuous) and in different professions, ranging from Accounting to Welding & Plumbing. An additional number of public TVET facilities under the responsibility of other ministries, mass organizations or administrations offer vocational education as well, not forgetting 321 Community Learning Centers and numerous private schools/colleges. Unfortunately comparable data are not available for all of these institutions. Furthermore, it must be considered that the table below (Fig. 2) does not distinguish clearly between academic and

vocational education offerings. Together all training facilities educate more than 50,000 vocational students per year.

Fig. 2: TVET delivery System under other Ministries and Organizations

	TVET Institutions	Number of trainees	Content of courses
Ministry of Public Health	University of Health Science and 12 Nursing schools	In 2008/09 13 master degree, 52 specialists, 308 bachelor degree, 227 higher diploma, 90 diploma, 638 nursing certificates	
Ministry of Finance	3 training institutes	In 2008/09 4,500 trainees in certificate and diploma courses	Finance; banking, accounting
Ministry of Agriculture and Forestry	5 specialist training institutes	In 2009: 448 students graduated	Crop production, livestock, fisheries, forestry, irrigation
Ministry of Information and Culture	5 training institutes		
Ministry of Justice	3 training institutes		
Bank of Lao	1 training institute		
Lao Women' Union	3 training centers	In 2008/09 440 trainees in non-formal courses	Cookery , garment, hairdressing, beauty,
Lao Revolutionary Youth Federation	10 training centers	In 2008/09 900 trainees	Languages, beauty, tailoring, computing
Community Learning Centers	321 centers across the country	1,608 trainees in 2008/09	Literacy, equivalency and short basic vocational skills

Source: UNESCO 2012, p. 11

In the following two chapters the structure and the characteristics of vocational education in Laos will be exemplified with reference to TVET education under the supervision of the MoES and the MoLSW.

2.1.1 Technical and Vocational Education and Training (TVET) under the Supervision of MoES

According to the amended education law 2007, TVET consists of following levels:

- Basic Vocational Education at certificate level is the vocational education with the training duration of 6 months to 3 years for the graduates of lower secondary school and equivalent.
- Diploma level is technical education for the graduates of certificate level by continuing program with the duration of 1-2 years, while by regular program

is the duration of 2-3 years for the graduate of upper secondary school and equivalent.

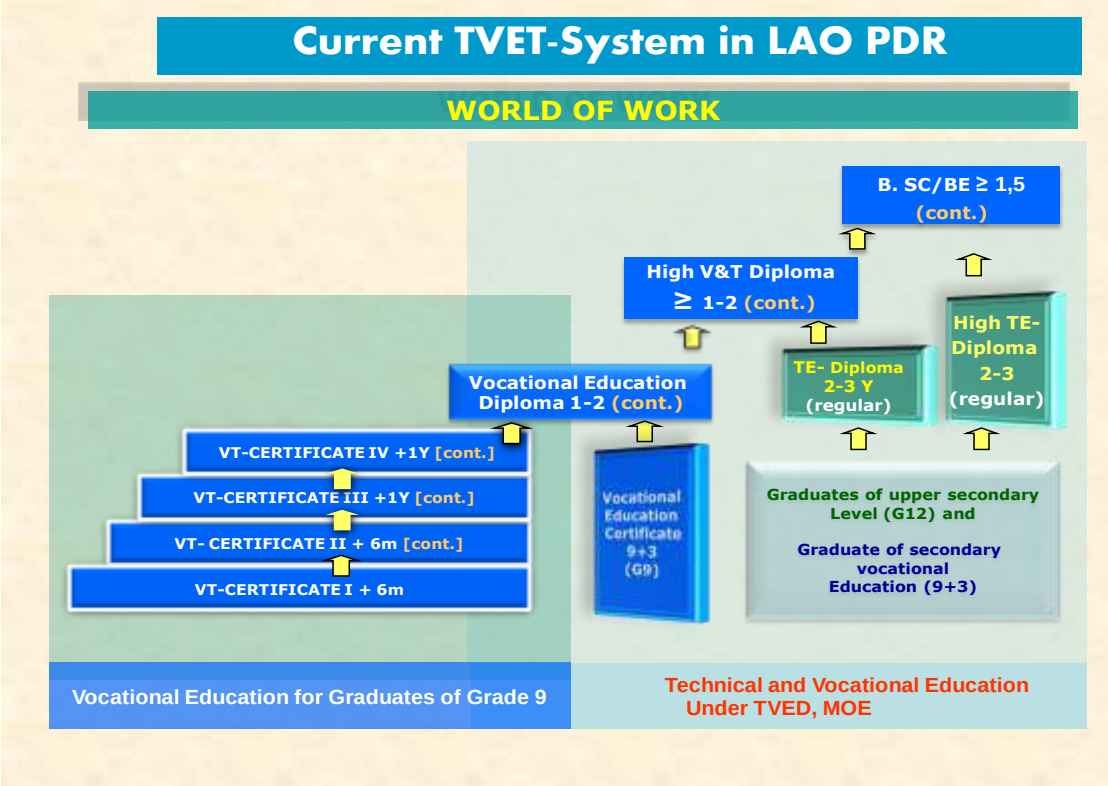
- High diploma level is technical education for the diploma graduates with the duration of 1-2 years for continuing program, while regular program is of 2-3 years for the graduate of upper secondary school and equivalent.

To enforce the education law as well as the labor law, the MoLSW and MoES have modified Lao TVET system according to the Prime Minister's Decree on TVET and Skills Development as follows (PMO 2010, Art. 13) and displayed in Fig. 3:

1. Basic Vocational education is a vocational education for those graduated in lower secondary school, which divided into the regular and continuous or linkage courses and programs as follows:
    i. Regular courses and programs for lower level requires 3 years of learning;
    ii. Continuous courses and programs for lower level applies the integrated form of vocational training, which divided into 4 levels such as certificate 1, certificate 2; certificate 3 as semi skilled worker, and certificate 4 as skilled worker.
2. Middle vocational education is the technical and vocational education for those, graduated in upper secondary school, which divided into two different courses and programs such as regular and continuous or linkage courses and programs as follows:
    i. Regular courses and programs requires 2–3 years of learning for those completed in upper secondary school or equivalent based on the specialized courses and programs;
    ii. Continuous or linkage courses and programs requires 1–2 years for those completed lower grade 4 or skilled vocational education based the specialized courses and programs;
3. Higher vocational education is the technical–vocational education for those completed secondary school or equivalent, which divided into two different courses and programs such as regular and continuous or linkage courses and programs as follows:
    i. Regular courses and programs for high level requires 2 – 3 years of learning for those completed secondary school based on the specialized courses and programs;
    ii. Continuous or linkage courses and programs for high level requires 1 – 2 years for those graduated from all types of medium vocational education based on the specialized courses and programs;

Apart from TVET in the high vocational education, it can also be undertaken through the higher continuous or linkage courses and programs.

Fig 3: Current TVET-System in Lao PDR



Source: cp. PMO 2010, Art. 13, 14, 19

At the same time, an integrated approach of TVE was adopted. The Integrated Vocational Education and Training (IVET) refers to a technical and vocational sub-system, dealing with different types of education and training such as TVET, basic VET and basic skills training as a whole. In addition, the dual cooperative training approach has been developed and in the process of the pilot testing.

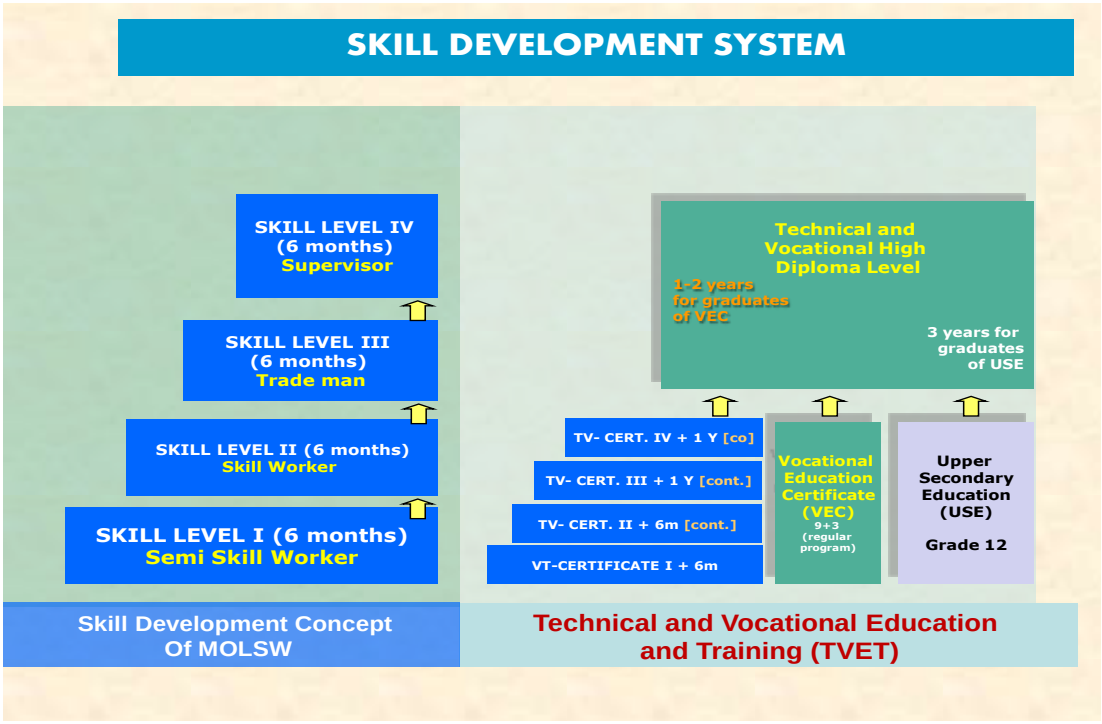
2.1.2 Skills Development under the Supervision of MoLSW

The Skills Development refers to the upgrading skills and attitudes in the performance for the Lao workforce who acquired basic vocational level forwards and previous experiences to gain more expertise and follow the workplace discipline in order to upgrade the technical and technological skills in preparation for participating in skills competition or skills assessment and certification according to skilled trades standards at national, regional, and international levels (PMO 2010, Art. 3).

The structure of skills development consists of (see also Fig. 4):

1. Basic skill level: learning period is six months or below, for a person has never obtained any vocational training courses;
2. Skill level I: semi skilled vocational courses and programs with learning period at six months, for general target groups;
3. Skill level II: skilled vocational courses and programs with training period at 6 months, for those passed the skills testing or assessment on level I with one year experience in relevant works;
4. Skill Level III: mechanics/engineer/tradesman courses and programs with training period at six months, for those passed the skills testing or assessment on level II with one year experience in relevant works;
5. Skill level IV: supervisor courses and programs with training period at six months, for those passed the skills testing or assessment on the skill level III with minimum two year experience in relevant works.

Fig. 4: Comparison of TVET and Skills Development



Source: cp. PMO 2010, Art. 13, 14, 19

Beside MoES and MoLSW a variety of TVET institutions exists, supervised by different ministries, like the Ministry of Public Health, the Ministry of Agriculture and Forestry etc. or administered by one of the mass organizations, e.g. the Lao Women' Union.

2.1.3 Issues and Challenges

Currently, there is lack of overall national qualifications framework (NQF) in Laos, which relates all levels of education, training and qualifications and identifies the pathways between them. In some cases, no frameworks exist even for the programs of single providers or authorities. However, the Department of

Technical and Vocational Education (DTVE) has strong efforts to develop the Lao Vocational Qualification Framework (LVQF) that is considered as the fundamental documents for the introduction of Competency Based Training (CBT)–Approach including the development of National Skills Standards, Curricula, Training Packages and Assessment Standard.

Despite greater efforts made by the government for strengthening TVET, especially the endorsement of relevant strategic and master plans, some important legal framework including the implementation, the TVET-quality of Lao PDR remains low compare to it neighboring countries. In addition, TVET is not yet fully accessible for the poor target groups, especially in the rural and remote areas. The National Education System does not yet respond to the socio-economic structure of the country. Moreover, the reputation of TVET – as described above – is very low. This has the consequence that too many people prefer an academic education, regardless the fact that TVET has been considered as one of the most crucial preconditions for economic development and poverty reduction.

2.2 Major education Policies

The previous chapter described the current state of the TVET sector. To get an idea of what efforts the education administration has undertaken to be prepared for the future, two main elements of the Lao education policy are discussed below.

2.2.1 The current State of the National Qualification Framework (NQF)

Referring to the national education reform phase I (2005-2010) and phase II (2011-2015) the idea of having a National Qualification Framework (NQF) in Lao PDR has been discussed and debated in various meetings in the past decade in order to enhance the relevance and the quality of education, especially vocational education. To facilitate the process the Premier Minister has issued a decree on setting up a National Training Council (NTC)[2] and regarding to that the president of NTC has been setting up several Trade Working Groups.

[2] NTC was established in April 2002

The MOES has, however, strongly commitment to strengthen TVET in term of quality improvement, increasing equitable access and strengthening administration and management. Hence the National Education System Reform Committee (NESRC) Meeting on the TVET and High Education Reform was organized from 12-13 June 2012 in Vientiane Capital. The members of the NESRC agreed, basically, with the proposed National Qualification Framework, which is illustrated below.

Fig. 5: National Qualification Framework (Lao PDR)

Qualification Level	Higher Education and Sport (MOES)	TVET (MOES)	Skill Training (MOLSW)
7 (professional)	PhD		
	Specialist 2		
	Master's Degree		
	Specialist 1		
	Graduate Diploma		
6	Bachelor's Degree	Bachelor's Degree	
5	Associate Degree	Higher Diploma/High Technician	Foreman/supervisor/**Skilled Level 4**
4		Diploma 2/Technician	Trades man/**Skilled Level 3**
3		Diploma 1/Certificate 4/skilled worker	Skilled Labor/**Skilled Level 2**
2		Certificate 3/Semi Skilled	Semi Skilled/**Skilled Level 1**
1		Certificate 2/Practical Skills	Award
		Certificate 1/Basic Skills	Award

The NQF (Fig. 5) will serve as a reference point and translation grid for all qualifications throughout the country that will benefit employers, education providers and job seekers in terms of recognizing qualifications issued within the country. If backed by a good system of quality assurance, they can support the development of workers' skills, facilitate educational and labour market mobility, and help improve the access of individuals to higher and different levels of education and training over their lives.

For the further introduction of the CBT-Approach, it is necessary that MoES, especially DTVE has greatly attempted to propose the Lao Vocational Qualification Framework with its level descriptors which implies the following five aspects:

1. Knowledge and understanding,
2. Practice: applied knowledge and understanding,
3. Generic cognitive skills,
4. Communication, ICT and numeracy skills,
5. Autonomy, accountability and working with others.

The particular levels and the accordant descriptors are displayed in "National Qualification Framework – Aspects and Descriptors" (see Annex 2).

To implement this NQF the Ministry of Education and Sport and Ministry of Labour and Social Welfare in close cooperation with international organizations and donors e.g. ILO, ADB, German Development Cooperation, etc. are on the stage of creating instruments and classifying qualifications according to a set of criteria for levels of learning outcomes.

The development of NQF will help Lao PDR to achieve better results and impacts of the education reform by shifting from the content of education and training being under the control of providers towards the content being related to the achievement of knowledge and skills required in particular occupations as perceived by industry stakeholders, particularly in vocational education and training. This movement towards standard-based learning outcomes will lead to the need for different forms of quality assurance for qualifications. At the same time it will create better opportunities to recognize previous knowledge for further learning, regardless of whether it was acquired in a formal, non-formal or informal way.

At the moment Lao PDR is in the process of transition from a 'Central Planned Economy' to a 'Free Market Oriented Economy', facing the great challenges of becoming more and more integrated into the ASEAN community. The successful implementation of ESDP in general and the TVET-Strategic Plan 2006-2020 and the Master Plan 2008-2015 in particular, will be a fundamental contribution to the Breaking Through Policy of the party and the government to enforce Human Resource Development and reduce poverty, to industrialize and modernize the country and finally to enable Laos to leave the status of a Least Developed Country until 2020.

2.2.2 Regulations of the Education Sector Development Framework (ESDF) concerning the Implementation and Evaluation of Standards

The Ministry of Education and Sports (MoES) recognizes the need for improved sector-wide planning to address key deficiencies across the education sector. The Ministry is keen to have a balanced approach to education sector development to ensure that investment in the national education system applies nationwide, scientifically verified, generally understandable, standardized and evenly distributed. This will overcome education system disparities that prevent a sustainable and balanced education sector development. A sector-wide framework leading to a single and agreed education sector ‐ wide approach will enable the government and development partners to plan according to agreed outcomes and targets within an annual implementation plan. This will allow all stakeholders to adopt a long ‐ term strategy for the support of the sector with investment planning captured within a single resource and funding envelope (cp. MoE 2009, p. 8).

The Education Sector Development Framework (ESDF) is supposed to be a major education sector plan for Lao PDR. As a plan it draws upon, the 8th Party Congress Resolution, which clearly defines education as the core of human resource development and a number of key policy documents including the Vientiane Declaration of Aid Effectiveness (2006), the new Education Law (2007), the National Education Sector Reform Strategy (2006-2015), the Education for All Action Plan (2003-2015), and the 7th National Socio-Economic Development Plan (2011-15) etc..

Regarding an employment oriented and sustainable development of TVET the ESDF emphasizes key government policies in support of vocational and post ‐ basic education and formulates it in ESDF including the

- Expansion of the role of the National Vocational Council;
- Setting of new education and training standards for the vocational training and technical education syllabus including new curriculum programs meeting societal demand;
- Development of degree level courses for TVET teachers in training;
- Strengthening of relations between TVET colleges and private and public sector enterprises;
- Provision of occupational training;
- General expansion of opportunities for students to enter upper secondary schools, vocational schools/colleges and university;
- Expansion of TVET colleges and opportunities for upper secondary school graduates to continue formal training through post-secondary TVET colleges; and
- Installation of at least one qualified integrated TVET College in each province.

The ESDF does not describe or specify any details concerning the implementation and evaluation of standards. Instead the central government and the Ministry of Education and Sports has been drawing and approving several regulations related to the implementation of standard summarized in the ESDF ('Education Sector Development Framework (ESDF) – legal Regulations' see Annex 3)

2.3 Current Situation of the Education and Qualification of TVET Teachers

To provide the TVET institutions, described in chapter 2.1, with qualified teachers, the first study program for vocational teachers at Bachelor level has been established in September 2004 at the Vocational Teacher Training Division (VTTD) at the Faculty of Engineering (FE) / National University of Laos (NUoL) with support of the Lao-German HRDME program (Human Resource Development for a Market Economy). By order of the MoE (cp. MoE 2011), VTTD has been upgraded to Vocational Teacher Education Department (VTED). This means greater autonomy in personnel, academic and financial matters. At the same time it also means more responsibility and increased expectations. During government negotiations in May 2010, the governments of Lao PDR and Germany agreed upon a new project of technical cooperation in the area of Private Sector Development and Vocational Training. This project encompasses a component, which supports VTED in re-designing its study program for vocational teacher education. The objective is not only to train qualified teachers needed for the expanding system of vocational education, but also to provide the opportunity to assume positions of management or administration within the TVET-sector.

Beside VTED there are two further institutions in charge of the education of vocational teacher. The Vocational Education Development Centre (VEDC) has been educating vocational teachers since 1999, albeit on the non–academic level of Higher Diploma. Unfortunately, despite noteworthy national and international efforts and good progress, neither VTED nor VEDC are able to supply a sufficient number of well-trained teachers (less than 50/year). In order to alleviate the lack of well-trained teachers, not only VEDC but also several vocational colleges/schools, have been authorized by Decree of the Ministry of Education

and Sport (MoES) to train vocational teachers up to Bachelor level (continuing education) as well. Despite being authorized by the Ministry, these approaches have evolved in an uncoordinated manner disregarding commonly recognized standards.

In demand driven vocational education systems, educational institutions receive signals as to which qualifications are in demand from enterprises and/or administrations and as to which level educated labor force is needed. Regrettably Lao PDR does not offer an effective labor market information system. "The study noted that a critical weakness in the Lao PDR . . . [is] the absence of up-to-date market information, so that it acted as a constraint to economic planning and to the effective operation of the Technical Vocational Education and Training (TVET) system." (Nam news Network 2010) Even within the responsible ministries reliable information is rarely available. What this implies can be seen by means of the following example. Officially the MoES reported for the school year 2008/09 a number of 1.065 teachers, working at vocational schools. For the same period a MoES-internal calculation came to the different result of 1.206 vocational teachers, which is about 13 % more then officially reported.

Nevertheless a survey in close cooperation with VEDC had been conducted in 2007, using these numbers to calculate teacher-student ratios. This survey found out that on average one teacher had to teach about 13.69 students in school year 2006/07. "Taking the student-teacher ratio into account it becomes obvious that the schools [in school year 2006/07] in general rely on a sufficient number of teaching staff. With the exception of TVS Champasak, TVS Luang Prabang, TVS Savannaket, and TS Vientiane Province, one teacher counts for less than 15 students, which is a quite an agreeable ratio." (Sisoulath et al. 2007, p. 37) Three years later, in school year 2009/10, the teacher-student ratio on average remains comparable (14.20).

Just recently the above mentioned figures have been confirmed: ‘‘According to reported figures, the student-teacher ratio at vocational schools looks like the following: There is one teacher teaching 33 students at Polytechnic College, one teacher teaching 30 students at Pakpasak Technical College, one teacher teaching 8

students at Lao - German Technical School, one teacher teaching 3 - 4 students at Houaphan Integrated Vocational Education School and so on. The ratio between teachers and students isn't balanced and this problem is difficult to solve. Standards, describing the required qualification of vocational teachers, are not available yet. These standards are crucial in terms of educating skilled workers, according to the demands of the national and regional labour markets. (cp. Thongdaeng Sihalath 2012, p 1).

Until now there was no specification of a target ratio of students to teachers for vocational education in Laos. In 2007 the World Bank in conjunction with the MoES has formulated the following numbers applicable to general education: "The Teacher Education Strategy for 2006-2015 and the Teacher Education Action Plan for 2006-2010 (TESAP) lay out specific targets in the area of ensuring adequate teacher supply and training. Among these are student-teacher ratios of 20:1, 30:1, and 27:1 in pre-school, primary and secondary respectively." (Benveniste 2007, p. 102) Since April 2012 the Prime Minister's Decree No. 177 specifies the number of students per teacher for the following kinds of educational institutes (cp. PMO 2012, Art. 11):

- Pre school 15:1
- Primary School 34:1
- Lower secondary school 30:1
- Higher secondary school 25:1
- Vocational school 20:1
- University 30:1

On average, vocational schools in Laos have already achieved this goal, even if a few schools are above these targets. Obviously the teacher-student ratio in general reflects rather an unequal distribution then a severe shortage of teaching staff in general. It can be assumed that the rural exodus, which is also an issue in Laos, is noticeable in vocational schools as well.

The previous chapter pointed out that Laos has a huge demand for skilled labour needed to develop its society and economy. However, an insufficient number of well-trained vocational teachers are available to train this qualified work force required by a rapidly growing economy. First and foremost VTED is responsible for the education and training of vocational teachers at Bachelor level. Between 2007/08 and 20011/12 some 113 students graduated successfully from VTED.

In order to be able to make statements about the quality of vocational teacher education at VTED, a Tracer Study has been carried out in 2010/11 (cp. Soysouvanh 2011, p. 13-27). This study followed the aforementioned graduates of VTED providing insight into post-graduate development and experiences. Its aim, amongst others, was to understand how former students evaluated their studies in retrospect and which content in particular was important for their professional development. The results of this survey should enable VTED and all institutes of higher education involved in the training of vocational teachers in Lao PDR to indicate deficits in present study programs and to serve as a basis for future changes. This information is useful for the planning and accomplishment of further development of curricula. For that reason information on the professional success of the graduates is needed as well as findings on the relevance of knowledge, skills and information on curricula and study conditions.

The **first objective** of the survey was to find out where the selected graduates were working irrespective of their current occupation. The authors assumed that more than 50 % of the graduates would have found employment in the field of vocational education. If graduates didn't work as vocational teachers what are the reasons for. The results partly confirmed the assumption and displayed that only 41.67 % of the interviewed graduates were teaching at a vocational school. Asked about the reasons why they do not work as a teacher, a few graduates answered that they had applied, but were not accepted. Some individuals responded that they chose not to work as teachers because of the unsatisfying work conditions. One of these respondents pointed out (e.g.), that the status of a full-fledged employee within public schools is achieved only after 2-3 years of work experience. On the contrary her/his current employer has awarded this status at the start of employment. It is also likely that a so called quota system that regulates both access to higher education and the transition of graduated vocational teachers into professional life prevents or hampers the recruitment of teachers. This may explain why, regarding the high demand for vocational teachers and the relatively low supply of graduates, only less than half of the graduates found an appropriate employment. In addition, the schools very

interested in employing graduates often do not have enough positions available and/or lack the necessary money on hand.

The **second objective** centered on the practical relevance of teacher training; therefore the training of vocational teachers should adopt a "dual approach". To ensure practical relevance, it is important that future teachers participate as soon as possible in "on-the-job-learning" both in enterprises and in schools. Therefore the curriculum of vocational education at Bachelor level should emphasize internships at vocational schools as well as in companies in order to allow students access to more practical training (e.g. maintenance of technical equipment). The graduates themselves certified that they did not receive enough practical training. They were missing sufficient practical exercises and internships related to their major subject as well as to the studies of vocational education and, therefore, didn't feel well prepared for their professional life. In particular, they demanded an improvement in practical exercises to prepare and to conduct lessons. To deliver these requirements means a significant extension of dedicated blocks of time towards practical training. Two internships – in enterprises and schools – each of four weeks duration, are obviously not sufficient to realize sustainable practical experience. Furthermore, training at the university does not always meet state guidelines. Thus, the respondents criticized that courses are often cancelled for various reasons and that lessons are not always carried out in accordance with the requirements of the curricula.

In order to educate a successful self-motivated, self confident and independent work force, innovative, creative and supportive teachers are required. Hence, the **third objective** focused on the motivation of the graduates for vocational education. The results showed that at least half of the graduates initially had chosen to study vocational education because of their personal interest in this field. Admittedly some of them were persuaded not to become a teacher. It seems to be more necessary than ever to improve the conditions significantly under which teachers have to work in Laos. As expected, the graduates, who are working in private companies, earn an annual income, which is on average about three times higher (21,000,000 LAK ≈ 1,800 €) than the annual income generated by graduates who work as teachers (7,016,600 LAK ≈ 600 €) or in

public administrations (6,126,667 LAK ≈ 520 €). This concerns amongst others the principles of employment opportunities, the level and structure of salaries and the chance to get ahead. For example, it seems to be common practice that teachers work overtime to generate higher income. This is understandable given the low income but prevents the recruitment of much-needed young talents and also deteriorates the quality of teaching. First, these teachers have little opportunity to prepare their lessons accordingly. Second, the classes are too large to perform high-quality teaching. If there is no progress in the future regarding this matter, there may be a selection towards candidates with highly reduced dedication to vocational teaching. A first step into the right direction has been done by carrying into effect the aforementioned Prime Minister's Decree No. 177. This document creates the legal basis for the regulation of many aspects related to the profession of teachers. For example it clarifies which institutions are in charge of the education of teachers, describes different models of teacher education, defines different groups of teachers and in particular stipulates teacher-student ratios (see above), teach loads, incentives and salaries for different kinds of teachers. This means for vocational teachers, that they should teach not more than 20 students per class, have to teach 14 h/week and will earn a salary, which is 15% higher than the basic income. Furthermore each teacher has to be evaluated once a year and as an additional incentive the decree provides – in case of a higher-than-average result – an upgrading within the salary structure. The future will show if these regulations are sufficient enough to motivate highly dedicated and qualified young people to become a vocational teacher.

Finally the **fourth objective** of the survey took aim at the relevance of the academic education for the professional career of the graduates in general. All respondents stated that their job required an academic degree. For the majority of respondents their occupation was directly correlated to their major subject. Combined with the fact that more then 80 % of the respondents found an occupation within 6 months post-graduation, these results showed that the studies are of significant relevance to the professional development of the graduates.

In summary it can be stated that the graduates value their studies in general as highly beneficial, even if the preparation for the professional life of a vocational teacher needs to be improved significantly. In addition it has become quite clear that a further improvement of the study course as well as the work conditions are essential for providing TVET system of Lao PDR with an sufficient number of well trained vocational teachers.

3 Standards for Teacher Education

As previously described, there is a lack of well-qualified teachers in vocational schools in Laos. There are different approaches worldwide to improve the quality of education systems due to the formulation of standards (cp. Bergmann/Mulkeen 2011). Besides the formulation of standards for degrees in general education and vocational training are also standards for teacher becoming more prevalent. In this chapter, therefore, the concept of standards will be described and several goals that can be pursued with standards will be discussed. After showing different aspects of standards important issues will be developed to serve for the analysis of existing standards in the following chapter.

3.1 Purposes and Use of Standards

In a first general approach a standard can be seen as a norm, meaning the definition of the quality of something. Technical standards for example define the attributes of a technical item, like its dimensions, its tolerance and the condition of its material. Furthermore they define the way something should be calculated, or the procedure that should be applied to solve a certain problem. If technical standards define tolerances of attributes, then care must be taken, not to violate these tolerances. The definition of a technical standard implies normally, that the compliance with the standard can be verified. This usually also applies to educational standards, but it is much more difficult to control the observance of these standards.

The term "standard", when used in the education context, does not have a strictly defined meaning, which often leads to misinterpretations. According to Bergmann and Mulkeen (2011, p. 14) "(…) it carries a variety of meanings in different contexts. The term standard can mean (i) a norm, (ii) a requirement, or (iii) a quality measure. Each of these uses implies a quality benchmark, but the level of compliance implied differs. A norm refers to a quality level that is expected or commonly used, but is not applied in all cases. A requirement implies that compliance is mandatory. A quality measure does not imply enforced compliance and may refer to a graduated series of benchmarks against which performance can be measured."

Educational standards might be grouped in three types according to the areas they address, namely

- Institutional standards, covering issues like organization of an educational institution, human resources, material resources like rooms, and equipment, and the vision and mission of the institution.
- Process standards, covering curriculum aspects, volume and content of instruction, as well as forms of learning, often including regulations concerning learners' assessment.
- Personal standards, which at the end are used to assess whether graduates have developed the competences and the knowledge they are expected to have developed.
-

Also in terms of grouping there is no commonly agreed pattern and a variety of layouts can be found. Bergmann and Mulkeen (2011, p. 15) for example use

- Input standards, defining resource inputs.
- Process standards, being related to the processes in education.
- Outcome standards, referring to learning outcomes or educational achievement.

Therefore, when developing educational standards or working with standards, it is necessary to define, what type of standards is being addressed and what purpose the standards should serve. In terms of these categories it is the objective of the study, to develop *outcome-oriented personnel standards*.

Educational standards are used for three purposes, namely (cp. TT-TVET Consortium 2009; Spöttl 2009)

- for supporting the quality development of educational programs,
- for creating a common understanding of quality and contents of an educational program, and
- as a basis for the mutual recognition of study achievements between different educational institutions.

Klieme et al. (2007, p. 9f.) suggests the following understanding of standards: Standards define common goals for educational institutions and they are used to evaluate educational outputs in the context of education monitoring and school evaluation. They explicitly discourage the use of educational standards as a basis for individual students' assessment or certification. On the other hand, standards like the INTASC-Standard of the United States, uses its standards for teacher certification (cp. CCSSO 2011, Chapter 4). So, when developing standards the stakeholders should agree and be aware of which purposes the standards should serve.

Educational standards usually define requirements with respect to a certain item like equipment, educational content or competences. Also educational standards only are meaningful, if the related indicators are checkable. Since educational standards can be met or achieved to a lesser of a larger extent, scales have to be attached to each item in order to define levels of achievement. Especially with respect to competence

standards this poses a major challenge: When defining a standard there must be an appropriate measurement method to assess, whether the standard is met. In case such a method is not available, an appropriate method has to be developed before the standard comes into effect.

The standards, which are developed in this study, should be conductive to the development of curricula for the training of vocational teachers. The standards are applicable for supporting the quality of the education of vocational teachers, but they are not designed for testing and certifying teachers at the first place. (see chapter 1.2)

3.1.1 The Development of educational Standards

Personal standards describe the competences a person should have either when graduating from an education program or when considered for the respective job, depending on the purpose of the respective standards. Competence in this respect denotes the capabilities, skills, and attitudes in the command of a person to accomplish his or her duties as a teacher (cp. KMK 2004, p. 4). Standards development can be based on two models.

The first model has to describe the job profile and the related duties of a teacher. Depending on the national setting there might be different types of teachers like assistant teachers, head teachers, theory teachers, practice teachers, skills trainers, etc. In addition, the job of a teacher does not only include teaching but also duties like curriculum development, school development, supervision and counseling, students' assessment and the like.

From these duties the second model, a competence model for this specific type of teacher can be derived. Usually, distinct competence areas are defined, and in each competence area, single competences are listed. This can be seen for example from the current German teacher educational standards (cp. KMK 2004). It must be noted, however, that teacher competence is a holistic competence, which cannot be split into parts, and that valid competence models therefore emphasize the interrelatedness of the individual standard items. Single, separated competences do not automatically add up to the holistic competence that is characteristic for a professional teacher.

Setting educational standards is also a political process. Therefore it is necessary to integrate the various national stakeholders into the process of developing the

standards as soon as possible (see chapter 1.3). Gerds (2009, p. 1409) emphasizes in this context that it is essential to refer "(…) to the particular cultural, economic and work-related environments in different countries and economies", meaning that in case of the education of teachers for technical and vocational education and training (TVET) standards should reflect the national job profile(s) of TVET personnel, the underlying philosophy of TVET, and the country's societal development model.

3.1.2 Measurability of educational Standards

Initial teacher education prepares the grounds for a later development of professional teacher competences. Accomplished teaching competences, however, are only achieved on the longer run, since they require, in addition to theoretical knowledge, extensive practical experiences combined with reflection and continuous learning (cp. KMK w/o year, p. 8ff). Therefore, in case the intention is to assess competences against standards, it is necessary to provide indicators or scales with each standard item to provide the possibility to assess. In case the standards are intended to raise awareness of teacher education institutions or to define a philosophy of teacher education, and assessing whether they are achieved is not intended, there might be no need for indicators and scales.

The German teacher standards (cp. KMK 2004, p. 7ff) for example identify eleven competences and for each of these competences define the standard which should be met after the first and after the second phase of teacher education (see chapter 4).

As Gerds put it: „Teaching is an extremely complex, partly open and partly hidden process. It cannot be assessed sufficiently only by the use of numerical psychometric data, but must also be considered through interpretative processes that remain open for responses and discourses with the candidates" (Gerds 2009, p. 1408).

Assessment schemes, as a consequence, must take into focus the ability of teachers to cope with complex requirements of their profession rather than to test against separate standard items. Assessment schemes therefore should be based on complex professional tasks, which are derived at the same time from the competence model and from the professional practice.

3.1.3 Verification of educational Standards

One of the goals of introducing educational standards usually is to improve the quality of education, often out of a qualitatively problematic situation. Improvement

processes, however, require inputs and take time. Static standards, like they are used almost everywhere in the world, are designed to check, to what extent or level the respective standard has been achieved. This poses problems at both ends on the scale, as well as for improvement processes. If the minimum level has not been reached, the individual or the institution has failed. If the maximum level has been reached, there is no reason for further improvement. For all achievements below maximum, static standards do not consider measures which were implemented for improving quality, but which have not yet yielded results. Open, dynamic educational standards, like they were developed in the field of TVET (QualiVET Project Group 2007) and later adopted for TVET teacher education programs (TT-TVET Consortium 2009), try to circumvent these shortcomings.

Once put into force, it is advisable to monitor and evaluate, whether the implementation of the scheme actually leads to the intended results, whether there are unintended or unwanted side effects, and whether the scheme needs improvement. Such monitoring and evaluation should be intensified during the phase of implementation and be run in regular intervals during operation. Monitoring and evaluation should be done in an independent manner in order to assure that the results are objective and independent of interests of involved groups of actors. For the implementation and the further development of the standards see chapter 7.

3.2 Impacts of a Standard-based Teacher Education

Hattie (2009) shows in his extensive meta-study that it's the teachers who make the difference in learning achievements of students. Even though his findings apparently are generated mainly from data on general education teachers and students, there is no reason to assume, that in school-based TVET the findings would deviate considerably. Thus, increasing the quality of teachers, i.e. their competences will lead to increased educational quality and improved educational output.

The aimed advantages of standard-based teacher education can be summarized as follows: Well and appropriately designed teacher education standards are assumed to lead to an improved teacher education, leading to better educated teachers, who are able to execute their profession more successfully. This increased capability from the side of the teachers most likely will lead to a better result in students learning.

3.2.1 Input-based versus Output-based Teacher Education

The discussion about standard-based education in most cases is associated with a shift from input towards output orientation. This also applies to the respective discussions in teacher education.

Beck (2005) differentiates between two types of competence standards.

Type 1 comes as a list, which defines competences as latent knowledge and abilities, which potentially could enable the teacher to act professionally. The problem with this type of standards is first, that often the respective items are not measurable, and second, that it is not clear whether they are actually applied to create professional teacher's acting.

Type 2 defines good practice patterns for the acting of a teacher in a number of contextual constellations, which are – on grounds of scientific findings – expected to lead to good learning results. In this case, the measurability depends on whether it can be observed that the teacher applies such patterns.

In any case Beck criticizes that with competence standards, meaning output-based definitions, the teacher education institutions are left alone with deciding, which input they should choose in terms of knowledge, resources, teaching and learning methods, etc., to develop these competences in their students. In addition he argues that the teacher profession requires "professionals" qualified in the same way as skilled workers, who always face situations, who they are forced to find individual solutions based on their knowledge, their experience, and their professionalism. For accomplishing this they have to recur on appropriate knowledge, theories, procedures and tools and their mastery, which are best imparted in an input-based setting.

3.2.2 Undesired Effects of Standards

Gerds (2009, p. 1409) notes that teacher educational standards can create a dogma in the sense of "the only legitimate view of teaching". The establishment of such a dogma could set a fixed standard of quality from which deviations are not allowed, neither in the bad nor in the good sense, and maybe also not with respect to local adaptation needs or future scientific findings. Standards, once achieved, might inhibit desirable developments in case they have not been foreseen in the process of their creation.

On the other hand it can be seen from various examples, e.g. from the United States or England, that the implementation of teacher standards at least initially can lead to a push in quality development. In any case, standards for TVET teachers should be formulated in such a way, that they do not restrict the necessary adaptation of vocational learning to locally different economic setting, different cultural settings, or economic developments.

3.3 Specific Vocational versus General Standards

While the previous subsection deals with the issue of standards from a relatively general point of view, this section will apply a more specific view with respect to personnel for technical and vocational education and training. Therefore the term teacher in this subsection always means TVET teacher, except when explicitly stated otherwise.

As stated above, teacher competence standards can contribute to make teacher qualification more transparent, to initiate quality development processes in teacher education, and to assure a certain competence level of teachers. This also applies to TVET teachers.

Quality of the output of TVET, however, and here is the difference to general education, cannot exclusively be measured against academic achievements with respect to a school curriculum. Instead, the ultimate sign of quality of TVET is how well its graduates perform on the labor market. In many countries, especially developing countries, school-based TVET is faced with the problem of being of little relevance to the labor market. This also applies to Laos (cp. UNESCO 2012, p. 62ff.).

One important reason for this are inappropriate curricula. Another reason are teachers, who have too little experience and knowledge of the world of work (cp. UNESCO 2012, p. 65). In such a situation a shift in the philosophy of TVET is required, which brings TVET close to the reality of the world of work. Appropriate teacher standards are one of the means to support the respective change processes.

Standard setting or developing bodies have to decide whether they want to develop and implement general standards for all teachers, or whether they want to develop specific standards for vocational teachers. For the decision it might help to have a look at the role of vocational schools and the work environment of vocational teachers as compared to that of general teachers.

3.3.1 The Role of vocational Schools

Subject areas defer considerably between general and vocational education. While general education teachers know their subject already from their own life as a school student, vocational teachers' subject areas are related to the world outside school, namely to the world of work. Work process knowledge (cp. Fischer/Boreham 2009), which should be the core of a vocational subject area, refers to real work environments, which hardly can be found in school environments. The world of work changes rapidly over time. This does not only refer to the all-so-often stressed deterioration and growth of professional knowledge but also to the nature of work (cp. Billet 2009a, pp. 179-183). Especially in developing countries it also refers to the implementation of new management and division of labor concepts as well as to increased quality requirements in production (cp. Dittrich 2010). General education subjects usually do not show such high dynamics.

In general education students mainly have to be prepared for continuing their educational career while TVET has to prepare students for the challenge of earning their and their families' lives in the world of work. When graduating from TVET students should have matured to adult persons while general secondary schools might leave this development step to subsequent educational institutions.

Vocational schools are increasingly challenged to play an important role in regional innovation systems, be it as a center of excellence, or be it by "just" intensively cooperating with actors within the economic sector. As such they are part of the economic system and have to cultivate cooperation with the respective actors and stakeholders. Compared to this, cooperation partners of general schools usually are students' parents or other educational institutions.

3.3.2 The Job Profile of vocational Teachers

While in parts the job profiles of general subject teachers and vocational teachers are quite similar, in that they both have to develop, plan, implement and evaluate instruction, assess learning outcomes, participate in the development of education programs, create appropriate and adapted learning environments, and have to participate in school development processes, for vocational teachers some of these areas of duty show specific characteristics, and there are additional ones (cp. Hartmann 2012; Spöttl/ Becker 2012).

The major part of teaching has to refer to occupational tasks and the knowledge, skills and attitudes required for accomplishing them. The teachers therefore need a profound knowledge of the occupational tasks and their embeddedness in work and business processes of the economic or industrial sector for which they educate their students. Ideally they themselves would be able to practically accomplish such tasks at an appropriate level of sophistication, especially in mainly school-based vocational education systems. Considering the speed of development in the world of work, instruction should be up-to-date or even advanced with respect to the development level found in the sector graduates are expected to work in.

Teachers should also support and enable self-directed learning. Searle asks: "Are TVET Professionals Facilitators of Learning or Deliverers of Knowledge and Skills?" (2009, p. 1259). They should be both within the ability to choose the appropriate way of teaching.

The development of education programs, especially for vocational education, increasingly lies in the hands of the vocational school. While often requirements imposed by national occupational standards have to be met, in many countries schools in addition are asked to adapt curricula to the needs of the local economy[3]. Also, vocational schools are often engaged in offering further education and training in their field of expertise, in addition to their programs of initial vocational education and training. This means that vocational schools should have the capacity to act in a market-oriented manner. Therefore profound knowledge of the sector in question as well as capabilities for conducting needs analysis and market surveys, i.e. conducting the necessary research, are indispensible[4].

Learning environments in vocational education and training defer from those in general education, in that they do not have to consider general pedagogical and didactical principles only, but they also have to provide opportunities to the students for making experience, which are relevant for their future work. Considering the structural reality-gap between school and industry and the often limited resources of schools in terms of up-to-date facilities, cooperation with the private sector, i.e. companies, in that respect should be considered indispensible, even where such

[3] In Germany the concept of broadly defined learning fields (Lernfelder) requires teachers to do their own detailing of the curricula.

[4] Zhao and Lu (2009) state, that this is quite common practice in China.

cooperation is not mandated by corresponding legal regulations. But also students' internships in companies, when they are foreseen in the curricula, require a close cooperation of vocational education staff with companies in order to acquire internship places and to organize the internship itself, so that it becomes a valuable learning experience for the students (cp. Billet 2009b).

With school development there is a similar situation as in the other areas of duty. A vocational school is successful, when a high share of its graduates is readily accepted in the labor market. Career guidance for the students therefore is an important task, including the cooperation with firms and companies in order to assure an appropriate qualification of the graduates and to facilitate job placements. To be a trusted partner of companies requires professionalism in managing the cooperation with the outside world at least at the same level on which the industrial partners act, as well as understanding their needs and their business fields.

Areas of duty which are specific to vocational teachers thus include but are not limited to providing vocational skills training, remaining up-to-date with requirements of economy and work places, cultivating collaboration with companies, providing career guidance and counseling, conducting a special type of labor market research, developing curricula for initial and further vocational education and training, and possibly assuming their role in a TVET institution based center of excellence.

3.3.3 Reasons for specific Standards for vocational Teachers

Teacher standards, which are applicable to all types of teachers are mainly developed with the view to general education teachers and therefore concentrate on classroom teaching, not least because general subject teachers usually number out teachers of vocational subjects. In order to summarize, vocational education, however, should take place to a large extent outside the classroom, namely in workshops and in real-word production environments.

The content to be imparted is different in type to the content of general education, since it is not purely academic but strictly related to the world of work. Vocational learning must be practical learning as opposed to more academic learning in general education, and for that different modes of learning are required. In addition, the modes of learning for different occupational areas are at least as different as those for foreign languages and mathematics. It is obvious that TVET teachers need

competences in the professional area they have to teach, like a foreign language teacher must be fluent in his language. TVET teachers deal with young adult learners on their way to the labor market and not with students on their way to the next educational institution. All these arguments imply that standards for TVET teachers must be different to standards for general teachers.

3.4 Questions and Criteria regarding the Analysis of existing Standards

To develop teacher standards it is helpful not only to think about a theoretical foundation of standards, but also to take into account already existing standards (cp. Wilbers 2010, p. 33).

From the issues and aspects presented in this chapter criteria in the form of questions can be derived which allow to compare and to analyze already existing teacher standards. The following main questions are considered in the next chapter:

Formal Structure

- What is the formal structure of the standards?
- What is the number of standard items?
- Which conceptual elements can be adopted, which have to be modified, which are not appropriate?

Target groups

- What is the target group? (e.g. all teachers, general education teachers, vocational teachers, teacher education institutions, etc.)

Purpose

- What is the purpose of the respective standard? (i.e. certification, quality assurance, quality development?)
- Do the goals and purposes of the analyzed standards coincide with the own ones?
- Does the theoretical and practical foundation of the analyzed standards coincide with the development objective?

4 Analysis of existing Standards

In order to broaden the own view, to participate on the results found out by others and to avoid mistakes that have already been made, it has been decided to carry out an comparative analysis of already existing standards. Therefore the following five existing standards (short versions see Annexes 4 - 8) have been analyzed in preparation of the development of standards for vocational teachers in Lao PDR. Since almost no standards for vocational teachers are available, standards for teachers in general are considered:

- England: Professional Standards for Teachers, issued in 2007 (TDA 2007)
- Germany: Standards für die Lehrerbildung: Bildungswissenschaften, issued in 2004 (KMK 2004)
- Lao PDR: Standards of Teachers, issued in 2010 (MoE 2010)
- USA: Model Core Teaching Standards (InTASC), issued as updated version in 2011 (CCSSO 2011)
- SR Vietnam: Professional Standard Regulation for Vocational Lecturers, Teachers, issued in 2010 (MoLISA 2010)

The CCSSO's Interstate Teacher Assessment and Support Consortium, responsible for the development and implementation of the InTASC-standards, perceives this approach also as useful and understands its own standards "as a resource for states [. . .] and others as they develop policies and programs to prepare, license, support, evaluate and reward today's teachers" (CCSSO 2011, p. 5). Following this recommendation the research team not only oriented on one source in its effort of developing standards.

Five reasons determined the selection of the standards to be analyzed. First, the number of standards should be manageable. Second, regional standards should be represented (Laos, Vietnam). We would have been glad for instance to include also standards from Thailand and Indonesia. These countries, however, found themselves unable to provide standards. Third, standards from developed countries with more or less experience in dealing with standards should be represented, not only from Europe (Germany, England) but also from the USA. Forth, even so the discussion about teaching standards lasts not very long, the team selected standards as up-to-date as possible. As can be seen above, most of

the standards are quite up-to-date. The InTASC standards are supposed to be an exception, so far as they are the updated version of standards, developed "in 1992, when there were no standards for teachers, and what was needed was a common vocabulary—a common understanding—of what good teaching should look like" (McWalters 2010). Fifth, the aim of this survey is to develop standards specifically for vocational teachers. Therefore it was important to find at least one standard model (Vietnam) designed for the specific characteristics of vocational teachers.

4.1 Formal Structure / Arrangement of the Standards

In a first step the formal structure of the selected standards will be analyzed. All countries taken into account have given their standards a multi-stage structure, consisting of three stages.

Fig. 6: Formal Structure of the Standards I

	1. Stage	2. Stage	3. Stage
England	Interrelated sections	Attributes	Standards
Germany	Areas of competence	Competences	Standards
Laos	Groups of characteristics	Sub-characteristics	Indicators
USA	Categories	Standards	Indicators
Vietnam	Criteria	Standards	Indicators

A structure subdivided into more than two stages specifies the first stage (sections, areas of competence, characteristics, categories, criteria) in a meaningful way, is easier to read and gives the user orientation where to look for the appropriate formulation.

Fig. 7: Formal Structure of the Standards II

	1. Stage	2. Stage	3. Stage	Σ
England	Professional Attributes	4 Attributes	9 Standards	33
	Professional Knowledge and Understanding	6 Attributes	12 Standards	
	Professional Skills	6 Attributes	12 Standards	
Germany	Teaching	3 Competences	11/10 Standards*	39/ 45*
	Educating	3 Competences	11/9 Standards*	
	Assessing	2 Competences	7/12 Standards*	
	Innovating	3 Competences	10/14 Standards*	

Laos	Attributes and Ethics	9 Sub-characteristics	43 Indicators	136
	Knowledge about Learners	5 Sub-characteristics	22 Indicators	
	Knowledge and Ability in Teaching	15 Sub-characteristics	71 Indicators	
USA (InTASC)	The Learner and Learning	3 Standards**	32 Indicators	162
	Content	2 Standards**	37 Indicators	
	Instructional Practice	3 Standards**	58 Indicators	
	Professional Responsibility	2 Standards**	35 Indicators	
Vietnam	Political Quality, Professional Ethics, Lifestyle and Behaviour	3 Standards	11 Indicators	49
	Professional Capacity	2 Standards	8 Indicators	
	Professional Pedagogy Capacity	9 Standards	24 Indicators	
	Professional Development Capacity, scientific Research Capacity	2 Standards	6 Indicators	

* The first number refers to the academic phase, the second number to the practical phase of teacher education.
** Each Standard is described by Indicators, which are assigned to three groups (kind of an additional stage): Performances, Essential Knowledge and Critical Dispositions.

The absolute number of standards or indicators (these two terms are used on the 3. stage) varies between 33 (England) and 162 (USA). The comparable big number of InTASC-indicators is mainly caused by the fact, that the InTASC-Standards use a kind of a forth stage in order to distinguish within the second stage between "knowledge, dispositions and performances as a way to probe the complexity of the teacher's practice" (CCSSO 2011, p. 6). In case of the Lao standards for general teachers the number of 136 indicators results in one hand out of the fact, that the indicators are structured in very small steps instead of more complex formulations [e.g. indicator No. 5: "Educate learner on good attributes." (MoE 2010, p. 1)]. On the other hand, some indicators repeat certain competences, which leads to duplications [e.g. indicator No. 7: "Able to learn/use important local language of point of station." (MoE 2010, p. 1) and indicator No. 132: "Learn ethic language of where one stations." (MoE 2010, p. 8)].

The German standards have a special feature, due to the structure of German teacher education. It is structured in an academic phase, finalized with a Master degree, followed by a mandatory practical phase, which lasts in general about 18 months and takes place at schools under the supervision of mentors. Nevertheless the standards are designed the same way. There are standards,

applying for the academic phase [e.g. competency 2: “Graduates know learning theories and different ways of learning.” (KMK 2004, p. 8)] and standards, applying for the practical phase (e.g. competency 2: “Graduates encourage different ways of learning and support their application.” (KMK 2004, p. 8)].

Considering the content related structure of the present standards they can be divided into three groups. In the first group the structure given to the standards orients very much on activities, the teacher has to execute. An example for this approach are the German standards, structured in teaching, educating, assessing and innovating. The second group orients very much on qualifications or capacities, required from the teacher. The English standards for example distinguish between professional attributes, knowledge, understanding and skills, the Vietnamese standards are focused on political quality, professional capacity, professional pedagogy capacity and professional development capacity. A good example for the third group are the InTASC standards, focusing on areas of responsibilities, typical for teachers, like learner and learning, content, instructional practice and professional responsibilities.

In all standards aspects of ethical behavior can be found, but only Vietnam and Laos refer expressly to these aspects, combined with political trustworthiness. Nevertheless also the German standards refer to – in this case – democratic values and standards.

4.2 Target groups of the Standards

The term ‘target group’ in this context means on one hand the kind of teacher, the standards apply for and on the other hand the level of experience and/or accomplishment, addressed by the standards.

The most standards worldwide are for general teachers without considering the characteristics of vocational education (cp. Wilbers 2010, 33). So, with the exception of Vietnam all other standards are developed for teachers in general, without any specification. The InTASC standards apply for all teachers, cutting “across all subject areas and grade levels” (CCSSO 2011, p. 3). The TDA standards as well have general applications, covering “all forms of organized learning experienced across the curriculum. For example, areas of learning in the

foundation stage, broad areas of curricular experience and learning through play in the early years, thematically structured work in the primary phase, single subjects, vocational subjects and cross-curricular work in the 14–19 phase" (TDA 2007, p. 5). The same applies for the German KMK standards, which have to be fulfilled by all teachers, regardless on what type of school, school level or subject the teachers are specialized for and regardless the education level of teachers.[5] With respect to the target group, the Lao standards – according to the MoES – are designed for primary and lower secondary school teachers. The only standards, applying explicitly "to vocational lecturers and teachers in vocational training colleges, vocational secondary schools, vocational training centers and other institutions engaged in vocational training", are the Vietnamese. And they clearly do not apply "to teachers and lecturers who teach general subjects and the other subjects in vocational training colleges, vocational secondary schools" (MoLISA 2010, p. 1). Consequently they are regarded as a basis for improving the quality of vocational teachers and lecturers as well as teacher training institutions, for assessing the requirements, expected of vocational teaching staff, for evaluating vocational teachers and lecturers and for developing further legal regulations (cp. MoLISA 2010, p. 2 and 7). Particularly the Vietnamese standards emphasize the expertise, professional skills and professional pedagogy capacity expected of vocational teachers and their responsibility to contribute to the development of the institution they are working for. Although the expectations are partly limited to formal requirements, like "Graduated from university . . ." (MoLISA 2010, p. 3), they give hints what distinguishes a vocational teacher from a teacher of general subjects, for instance the proficiency of professional skills and the understanding of the importance of occupational health and safety.

England provides standards defining "the characteristics of teachers at each career stage. Specifically it provides professional standards for

- the award of Qualified Teacher Status (QTS) (Q)
- teachers on the main scale (Core) (C)
- teachers on the upper pay scale (Post Threshold Teachers) (P)
- Excellent Teachers (E)
- Advanced Skills Teachers (ASTs) (A)" (TDA 2007, p. 2).

[5] Currently, a more detailed specification of standards, for example for vocational teachers, is under discussion in Germany.

These standards draw a picture, how the teachers' career could look like. This means that "teachers who are assessed as meeting" the standard for P, E or AST "also access the relevant pay scale" (TDA 2007, p. 2). Even though the German KMK standards differentiate between the academic and the practical phase of teacher education, they do not define different career stages and therefore can't be applied as so-called pay-standards.

All other analyzed countries designed standards, which do not distinguish between different levels of experience and professionalism. The InTASC standards for instant declare, that "these standards are no longer intended only for 'beginning' teachers but as professional practice standards, setting one standard for performance that will look different at different developmental stages of the teacher's career. What distinguishes the beginning from the accomplished teacher" – and the German standards argue in quite the same way – "is the degree of sophistication in the application of the knowledge and skills" (CCSSO 2011, p. 6). However, what is missing is some kind of instruction that tells how the standards have to be handled, to assess different levels appropriately, how the standards look like at different developmental stages. In the case of Vietnam, the standards (Article 3 No. 4) indeed distinguish between "teachers of elementary level (hereinafter referred to as the vocational primary teacher), teachers of intermediate level (hereinafter referred to as vocational secondary teachers), and teachers of advanced level (hereinafter referred to as vocational college teacher)" (MoLISA 2010, p. 2). However these standards are just limited to this formal classification without making further proposals for the deployment or implementation of the different levels.

4.3 Main Purpose of the Standards

In Chapter 3 it has been described, what possible aims are pursued with the implementation of educational standards. Although Laos doesn't explicitly declare the purpose of its already existing standards, it can be assumed that the implementation of them mainly serves the improvement of education in general. This assumption will be supported by the fact that these standards have been developed within the context of the Second Education Quality Improvement

Project–Teacher Training Enhancement and Status of Teachers Project (TTEST), funded by Sida (cp. MoE 2008a, p. 14).

With respect to the fact that Laos as well as Vietnam are considered as developing countries, Vietnam states quite the same motivation for issuing its standards as they have to act as a "basis for building the training objectives, training and fostering programs to improve the quality of vocational lectures, teachers" (MoLISA 2010, p. 2).

Even the German KMK standards also serve as a crucial element in order to maintain and improve the educational quality. But in addition the German ministries of education perceive them as a basis for the development of teacher education curricula and for the regular evaluation of teacher education (cp. KMK 2004, p. 1).

As described in detail above England uses its standards primarily as a "framework for a teacher's career" (TDA 2007, p. 2) and a tool to plan his/her future development towards the next higher qualification level, connected with an accordant higher salary.

InTASC pursues with the implementation of its updated standards a new vision: "The updating of the core teaching standards was driven not only by new understandings of learners and learning but also by the new imperative that every student can and must achieve to high standards. (. . .) These standards embrace this new emphasis and describe what effective teaching that leads to improved student achievement looks like" (CCSSO 2011, p.3). A further purpose of these standards "is to serve as a resource for states, districts, professional organizations, teacher education programs, teachers, and others as they develop policies and programs to prepare, license, support, evaluate, and reward today's teachers" (CCSSO 2011, p. 5). The last statement illustrates that the InTASC standards in contrast to the other standards are considered as a recommendation without being legally obligated. Apparently states follow the encouragement of CCSSO "to review their professional teaching standards and either adapt or adopt the InTASC model core standards as part of that review process" (CCSSO 2011, p. 5). Until 2011, when the revised version were released,

“thirty-eight states (. . .) have teaching standards that were based on the 1992 InTASC standards” (CCSSO 2011, p. 5).

In summary it can be stated, that the hoped-for improvement of the educational quality in general seems to be the most outstanding motive for developing standards. At least this applies apparently for Laos, Vietnam and Germany. England and the USA pursue more sophisticated aims, which could depend partly on the fact that these countries are considered as developed and partly that both countries have a longtime experience in developing, applying and updating Standards. Otherwise, even in their case the improvement of education is definitely a goal to strive for.

4.4 Outcome of the Analysis

There are different approaches to develop teacher standards. One could start from scratch with a clean sheet of paper, based on an extensive theoretical research. A more practical oriented approach carries out extensive empirical research beforehand the actual development of the standards. In preparation of the development procedure the research team analyzed currently existing standards and compared them by means of certain criteria to find out whether they can be adapted to specific needs. This approach not only saves time and effort, it also helps to avoid errors, to participate in experiences and to stay up-to-date. Going this route, this study follows on the one hand the recommendation of CCSSO to ‘either adapt or adopt’ and on the other hand it follows the good example of the Southeast Asian Ministers of Education Organization Regional Center for Educational Innovation and Technology (SEAMEO INNOTECH), which carried out an eleven country audit in order to develop a common core teacher competency standard framework for Southeast Asia (SIREP framework, see chapter 5).

As described in the chapters 4.1 to 4.3, the analysis of the existing standards has been carried out based on four criteria: What does the formal structure of the standards look like? What content-related aspects have mainly determined the structure of the standards? Which target group is addressed by the standards? What is the main purpose of the standards? The results of this analysis will significantly determine the design of Laotian standards to be developed for

vocational teachers, of course under thorough consideration of specific conditions and requirements, Lao PDR is asking for.

With respect to the results of the analysis it has been decided to give the Laotian vocational standards a three-staged structure as well, identifying and highlighting important aspects of a teacher's profession and focusing on vocational teachers at bachelor level. The Laotian stakeholder were most convinced by the clear formal and content-related structure of the German standards and took it over, supplemented by an additional competency area, named 'Competency Area of Acting in an exemplary Manner'.[6] Following the German structure Laos named the first stage 'Area of Competency' and the second stage 'Competency'. However, instead of using 'Standard' for the third stage, it is named 'Indicator', because an indicator describes the stage or level of something, in this case the level of the competency, a vocational teacher has to achieve. Furthermore „Indicator" highlights, that standards should be formulated – if possible – in a measurable way. The German approach, to distinguish between an academic and a practical phase, has not been taken over. This specific approach isn't eligible for Laos simply because the Laotian teacher education system doesn't provide this kind of structure.

The newly developed standards provide 80 indicators in total describing the requirements, imposed on the acting of Laotian vocational teachers. This number of indicators mirrors the attempt to find a balance between comprehensibility and complexity, between completeness and clarity, between remaining realistic and focusing on the future, between being factual as far as possible and being abstract as far as necessary.

For the research team the target group was clearly defined by the Ministry of Education and Sports. Standards for vocational teachers should be developed. However, these standards do not have to apply only for vocational teachers, but for all teachers, who work in public and private institutions of technical and vocational education, such as vocational schools, colleges, skills development centers etc. In contrast to Vietnam these standards are not limited to a specific

[6] This decision has been made during the Capacity–Building– / Continuing Research–Workshop, which took place on 24th/25th May 2012 in Thalat.

group of teachers but focused to specific educational institutions. This ensures that at one institution all teachers are working in compliance with the same standard.

According to the results of the tracer study, mentioned in chapter 2, the education of vocational teachers in Lao PDR needs urgently "improvement in terms of working conditions, wage structure and career opportunities" (Soysouvanh 2011, p. 26). The design of 'pay standards', as they are called in England, could have been an option in order to decrease these obstacles, but at the time being this seems to be politically not feasible. However, the Lao Government already issued a decree (cp. MoE 2012), stipulating amongst others a modified salary structure for teachers, additional incentives awarded to teachers and therefore draws a more appealing picture of how a teacher's career could look like. As stated already in previous chapters, the improvement of the educational quality in general seems to be the most outstanding motive for implementing standards. The standards, which have to be developed for Laotian vocational teachers aren't an exception in this context. The distinct purpose of these standards is the improvement of vocational education in general. To pursue this purpose they also have to serve as a basis for the redevelopment of teacher education and the revision of the respective curricula.

To ensure that the standards, which has been designed so far not only meet regional and international requirements but also consider the challenges of the 21st century, the research team has decided, to correlate the draft of the standards in a final step with two supranational standard frameworks.

5 Correlation with supranational Standard Frameworks

Developing Standards for Vocational Teachers in Lao PDR the research team considered

- the theoretical foundation of standards for teachers, discussed in chapter 3,
- the specific national preconditions of Lao PDR, described in chapter 2,
- existing standards, analyzed in chapter 4, and
- the experience and expertise of stakeholders as well as members of the RCP-platform.

In a last step it has been decided to correlate the standards evolved so far using two supranational standard frameworks as benchmarks, the UNESCO ICT–Competency Framework for Teachers and the SEAMEO INNOTECH Teaching Competency Standards in Southeast Asian Countries. What have been the reasons for this correlation? Firstly the very existence of these supranational frameworks to some extent forced the team to consider them when drafting the standards. Secondly the institutions, entrusted with the design of these supranational frameworks, understand them as benchmarks for standard development. SIREP states that the intention of the SEAMEO INNOTECH Teaching Competency Standards is, "to assist the (. . .) member states in benchmarking and developing their own teaching competency standards" (SIREP 2010, p. 7). UNESCO underlines the intention of the ICT–Competency Framework for Teachers in a similar way. This framework is not only "intended, to inform educational policy makers, teacher-educators (. . .) on the role of ICT in educational reform" (UNESCO 2011, p. 3), but also "specifies the competencies which teachers need in all aspects of their work" (UNESCO 2011, p. 8). Thirdly supporting the development process within countries in general, these two frameworks could be considered "as an important statement (. . .) on how teacher-education, particularly in developing countries, can increase the effectiveness of teachers" (UNESCO 2011, p. 5) Therefore this correlation must serve to further improve the quality of the drafted standards. Amongst others the correlation process was determined in particular by the following questions:

- Did the development process follow the right objectives?
- Have regional specifications been taken into account sufficiently?

- Are these standards developed to be appropriate for the 21st Century. Can it be assumed that they have long-term significance?
- Are there further aspects that have not been taken into account in the development process?

5.1 UNESCO ICT–Competency Framework for Teachers

Worldwide it is agreed that the appropriate use of information and communication technologies (ICT) can be beneficial for the education of people. The possible benefits range from "improved teaching and learning processes to better student outcomes, from increased student engagement to seamless communication with parents, and from school networking and twinning to more efficient management and monitoring within the school" (UNESCO 2011, p. 4). Being aware how important ICT for education can be, UNESCO, in cooperation with partners from the industry and further experts, developed the UNESCO ICT–Competency framework for Teachers (ICT-CFT), applicable "to all levels of education: primary, secondary, vocational and tertiary education as well as on-the-job-learning and continuing education" (UNESCO 2011, p. 8), This framework was first published in 2008 and updated in 2011.

Based on the understanding, that a more sustainable economic growth requires increased human capacities, economists identified the following three productivity factors (cp. UNESCO 2011, p. 7):

- The ability of the workforce to use equipment, which is more productive.
- The ability of the workforce to increase the value not only the amount of the economic output.
- The ability of the workforce to generate new knowledge by itself.

In order to connect the development of education with economic development, the present ICT-framework outlines three approaches to teaching based on the above-mentioned productivity factors, representing different stages in the use of information and communication technology within education.

The **Technology Literacy approach** is supposed to increase "the extent to which new technology is used by students, citizens and the workforce by incorporating technology skills into the school curriculum".

The **Knowledge Deepening approach** is supposed to increase "the ability of students, citizens, and the workforce to use knowledge to add value to society and the economy by applying it to solve complex, real-world problems".

The **Knowledge Creation approach** is supposed to increase "the ability of students, citizens, and the workforce to innovate, produce new knowledge, and benefit from this new knowledge" (UNESCO 2011, p. 7).

The ICT–framework consists of 18 modules. These modules have been developed by crossing these three different approaches to teaching with six aspects of a teacher's work, related to the use of ICT.

Fig. 8: ICT–Framework

Six aspects of a teacher's work	Technology Literacy	Knowledge Deepening	Knowledge Creation
Understanding ICT in Education	1	1	1
Curriculum and Assessment	2	2	2
Pedagogy	3	3	3
ICT	4	4	4
Organization and Administration	5	5	5
Teacher Professional Learning	6	6	6

Source: UNESCO 2011, p. 9

Each country has to decide which approach is appropriate to adopt, depending "on the extend to which ICT is currently integrated into its society, economy and education system" (UNESCO 2011, p. 9). Although Lao PDR made the strong commitment to become a knowledge-based society (cp. Government of Lao PDR 2011), currently the economy of the country is based primarily on natural resources (cp. UNDP 2010, p. 5) and subsistence agriculture. Therefore it seems to be appropriate for Laos to adopt in a first step the approach of 'Technology Literacy', in order to "enable learners, citizens and the workforce to use ICT to support social development and improve economic development" (UNESCO 2011, p. 9). Occasionally the objection is claimed that the schools and the teachers in Lao PDR are not properly prepared for the use of ICT. Considering the present situation, this objection is true. Generally the schools lack sufficient equipment and most teachers lack the required knowledge. However, one must take note that at the same time, the MoES is well aware of this situation, but sets a very ambitious goal in terms of "upgrading teachers for technical and pedagogical subjects and upgrading TVET managers and administrative

personnel continuously in order to enable them to follow the ICT development" (MoES 2007, p. 11). Therefore it seems to be crucial and not exaggerated to include the application of ICT into the standards in order to provide an appropriate tool for the 21st century.

Assuming that 'Technology Literacy' seems to be the most appropriate approach for Lao PDR, the following table shows ICT-related competencies, teachers are expected to demonstrate, related to the six aspects of a teacher's work (cp. UNESCO 2011, p. 20–24) and the accordant indicators, located within the standards, developed so far. On the left side of the table, there are six aspects of a teacher's work, each illustrated by the corresponding curriculum goals and competencies, expected from the teachers. On the right side of the table all passages are listed, where the required competencies of the teachers can be found within the indicators of the developed "Standards for Vocational Teachers in Lao PDR". In this way it can be ensured that the competencies required by the ICT framework are actually mapped in the developed standards.

Fig. 9: Six Aspects of a Teacher's Work

UNESCO ICT–Competency Framework for Teachers			**Standards for Vocational Teachers in Lao PDR**
Six Aspects of a Teacher's Work	**Curriculum Goals**	**Teacher Competencies**	**Indicators**
Understanding ICT in Education (Module 1)	**Policy Awareness** With this approach, programs make direct connections between policy and classroom practices.	Teachers must be aware of policies and be able to articulate in consciously skilled ways how their classroom practices correspond to and support policy.	Indicator 1.2
Curriculum and Assessment (Module 2)	**Basic Knowledge** Changes in the curriculum entailed by this approach often include improving basic literacy skills through technology and adding the development of ICT skills in different contexts, which will involve incorporating in other subjects a range of relevant ICT resources and productivity tools.	Teachers must have an excellent knowledge of the curriculum standards for their subject, as well as knowledge of standard assessment strategies. In addition, teachers must be able to integrate the use of technology into the curriculum.	Indicator 8.10
Pedagogy (Module 3)	**Integrate Technology** Changes in pedagogical practice involve the integration of various technologies, tools, and digital content as part of whole class, group, and individual student activities to support didactic instruction.	Teachers must know where, with whom, when (as well as when not) and how to use ICT for classroom activities and presentations.	Indicators 9.1 and 9.2
ICT (Module 4)	**Basic Tools** The technologies involved in this approach include the use of computers along with	Teachers must know basic hardware and software operations, as well as	Indicators 8.4 and 14.1

	productivity software; drill and practice software, tutorials, and web content; and the use of networks for management purposes	productivity applications software, a web browser, communications software, presentation software, and management applications.	
Organization and Administration (Module 5)	**Standard Classroom** Little change in social structure of the class occurs in this approach other than, perhaps, the spatial placement and integration into the lesson of technology resources in the classroom or in labs.	Teachers must be able to use technology with the whole class, small groups, and individual activities and ensure equitable access is provided to all students.	Indicator 16.7
Teacher Professional Learning (Module 6)	**Digital Literacy** The implications of this approach for teacher education focus on the development of digital literacy and the use of ICT for professional improvement.	Teachers must have the technological skill and knowledge of web resources necessary to use technology to acquire additional subject matter and pedagogical know-ledge in support of their own professional learning.	Indicator 15.5

Source: cp. UNESCO 2011, p. 20–24

5.2 SEAMEO INNOTECH Teaching Competency Standards in Southeast Asian Countries

Teacher competency standards have been developed, implemented and monitored also in different Southeast Asian countries, based in general on the conditions of the specific country. The Southeast Asian Ministers of Education Organization Regional Center for Educational Innovation and Technology (SEAMEO INNOTECH) carried out a study, comparing standards in terms of an 'Eleven Country Audit' from Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam. The main objectives of this audit were to describe the current state of standard development across the Southeast Asian region, to explore commonalities in these standards and to facilitate capacity building, teacher exchange and lifelong learning on a regional level. "The outcome of the study resulted in the development of a set of common core teacher competency standards for SEAMEO countries. These were translated into a competency framework composed of a list of general and enabling competencies that Southeast Asian teachers would need to master to be effective in the 21st century." (SIREP 2010, p. 3) The abovementioned set of common core teacher competency standards, called 'General Area of Responsibility / Competency (A – K), subdivided and operationalized into 'Specific Tasks / Competencies' have been outlined in a table (see Annex 9). In order to check the completeness and quality of the

standards, developed so far, the "Teaching Competency Standards in Southeast Asian Countries" has been used as a benchmark. This test led to the result, that competences if necessary have been supplemented and indicators have been formulated more precise or respectively more comprehensive. The numbers in red (see Annex 9) under each Specific Task / Competency refer to the relevant indicator of the newly developed standards.

The following examples illustrate the approach and some of the considerations that have been made during the alignment process.

4 pillars of education: Within the General Area of Responsibility / Competency the sixth Specific Task / Competency (A.6) stipulates, that teachers have to "assess students' knowledge, skills, values and attitudes on the 4 pillars of education". UNESCO developed the concept (cp. UNESCO 1996), that education throughout life is based on 4 pillars: learning to know (including learning to learn), learning to do, learning to live together and learning to be. Almost the entire competence area A refers to this concept (e. g. learning to know in A.2), so that the decision was made to highlight this concept using the indicator 10.5 within the competence No. 10 'Supporting the learning process'.

Information and Communication Technology (ICT): As outlined above UNESCO recommends the provision of ICT-competence in order to promote the sustainable development of countries. The SEAMEO INNOTECH framework also mentions the integrated use of ICT in teaching and learning, if only in Specific Task E.4. Because the provision of such a future-focused competence deserves to be considered more in detail, it was decided to stress ICT not only in the Competence area of Teaching (Indicators 8.4, 8.10, 9.1, 9.2) but also in the area of Innovating (Indicators 14.1, 15.6, 16.7).

Higher Order Thinking Skills (HOTS): The concept of HOTS, referred to quite often in education-related sources, based on the taxonomy of educational objectives, published by Benjamin Bloom in 1956 (cp. Bloom et al. 1956). He distinguishes six different levels of thinking: knowledge, comprehension, application, analysis, synthesis and evaluation. Higher order thinking skills are those skills in the top three levels: analysis, synthesis and evaluation. These three skill levels are summarized in critical thinking. Quite similar to the 4 pillars

of education, the entire General Area of Responsibility of the SEAMEO INNOTECH framework refers to HOTS. Even so that HOTS are obviously very important for the education of self-determined learners, it seemed to be sufficient to emphasize these skills under the more self-explanatory label 'critical thinking (analysis, synthesis, evaluation)' within the competence areas of Motivating learners (Indicator 11.2) and Measuring performance (Indicator 13.2).

5.3 Conclusion

The correlation of the drafted standards with two supranational frameworks was absolutely crucial and has been proven as very useful. In particular, aspects that had not been taken into consideration could have been made visible. At the same time, the team has been confirmed that it is on the right track. In the following chapter the result of this very thorough development process will be displayed in detail.

6 Standards for Vocational Teachers in Lao PDR

This document provides Standards for Vocational Teachers (hereinafter referred to as 'teachers') in Lao PDR with the aim to promote and maintain high quality of teaching practice. The standards describe the expected competencies, including knowledge, skills, attitudes and behavior, in order for teachers to conduct their professional duties.

The following Standards have been developed on behalf of the Ministry of Education and Sports (MoES) taking into account:

- the present situation of the vocational education system of Lao PDR,
- the legal framework and education policy of Lao PDR,
- existing national and international standards,
- specifications of vocational education.

In order to ensure the quality of the Standards they have been aligned with two important standard frameworks[7].

Scope of Standards

These Standards apply to all teachers, who work in public and private institutions of technical and vocational education, such as vocational schools, colleges, skills development centres etc.

The Standards are structured into the following five competency areas:

A. Competency Area of Acting in an exemplary manner
B. Competency Area of Educating
C. Competency Area of Teaching
D. Competency Area of Assessment
E. Competency Area of Self-Development and Innovation

Each competency area will be subdivided into specific competencies (**1. – 16.**), illustrated by indicators.

[7] Information and Communication Technology – Competency Framework for Teachers (ICT–CFT), first published in 2008 and updated in 2011 by UNESCO; Teaching Competency Standards in Southeast Asian Countries, published in 2010 by SIREP (SEAMEO INNOTECH Regional Education Program)

A.	**Competency Area of Acting in an exemplary Manner** Teachers are aware of the specific requirements of their profession in terms of attitudes, ethical behaviour and the assertion of their rights and duties.	
1.	**Internalizing positive attitudes** Teachers show a positive attitude towards the nation and the politics of the government and act as a role model for learners and society.	1.1 Support the policy of the government. 1.2 Support the decisions of the government that focus on the social and economic development of the country and implement these decisions within the context of their classroom practices, and generally during professional activities. 1.3 Are members of at least one of the mass organizations and take active part in the activities of the organization. 1.4 Act as a role model for society in general and for the learners entrusted to them particularly in relation to dressing decently, behaving properly and honestly, and in compliance with the constitution and national law.
2.	**Recognizing National Ethics** Teachers consider national ethics during work and in their private lives and put them into practice.	2.1 Respect the fundamental rights of every human being and treat all learners fairly and equally. 2.2 Know, reflect critically and communicate social values and standards based on tradition, religion and culture. 2.3 Respect their position of authority and do not use this authority to take advantage of others, or be influenced by others unduly.
3.	**Respecting Rights and Duties** Teachers understand their profession as a public duty, encompassing specific responsibilities and obligations.	3.1 Are familiar with the basic principles and structures of the national educational system. 3.2 Align their professional activities with the three characteristics and five principles of education[8], and the needs of the learners. 3.3 Know the legal framework of their profession including their own rights and duties and act accordingly. 3.4 Understand their profession as a teacher as a service to their country and its society. 3.5 Work according to scientific standards where it is appropriate and necessary.

B.	**Competency Area of Educating** Teachers educate learners entrusted to them with great responsibility, and involve other people who are also responsible for the learners' performance (i.e. parents, family members, caregivers).	
4.	**Considering the diverse backgrounds of learners** Teachers know the social, ethnical and cultural living conditions of learners and promote their individual development.	4.1 Know selected pedagogical, sociological and psychological theories of development and socialization of young people. 4.2 Are familiar with the impact that culture, ethnicity and gender can have on the educational process. 4.3 Consider the cultural, ethnic and social diversity of the respective study group. 4.4 Identify disadvantages and provide suitable pedagogical support.
5.	**Considering the working environment** Teachers are closely associated with the working world and the labour market and support learners to orient themselves within this new environment.	5.1 Have knowledge of the practice of working and the working environment in relation to the relevant curricula areas. Connect this knowledge with their own experiences of working and transfer this knowledge to the learners. 5.2 Show learners how to apply theoretical knowledge within the practical context of the workplace. 5.3 Train together with learners to demonstrate how to plan, organize and cope with routine and non-routine tasks associated with the workplace.

[8] MoES (2012): National Standards of Curricula (Draft), Vientiane, p. 7

	5.4 Demonstrate to learners how to select and handle tools, materials, machinery and equipment in an appropriate, responsible and safe way. 5.5 Are familiar with legal and practical working conditions and the required occupational health and safety precautions including first aid facilities. Train learners how to recognize these conditions within the work environment.
6. Supporting self-determination Teachers support learners to develop self-confident and self-determined characteristics.	6.1 Know how to support students to develop self-confident and self-determined characteristics. 6.2 Encourage learners to make their own decisions, and practice with learners to develop skills in self-determination. 6.3 Train together with learners to demonstrate how to deal with personal crises.
7. Communicating and interacting Teachers manage classroom activities and prevent, identify and solve difficulties and conflicts, which occur during the education process in classrooms, workshops or generally at school.	7.1 Have knowledge of interpersonal communication methods and apply interaction techniques within the learning environment. 7.2 Discuss and explain rules with learners to promote respect between one another, and ensure implementation of rules. 7.3 Organize social relationships between learners, colleagues, parents, families, caregivers, companies / employers and the work environment. 7.4 Are able to tackle discipline problems particularly during lessons (unrest, noise, inattention etc.) and to retain control. 7.5 Identify and analyze conflicts and their causes and demonstrate the ability either to prevent or to solve them in an appropriate way. 7.6 Develop and implement in cooperation with colleagues common approaches in dealing with problems and conflicts.

C. Competency Area of Teaching Teachers have a good command of the teaching and learning process.	
8. Planning lessons Teachers prepare lessons in a professional and appropriate way, considering a wide range of different temporal and organizational arrangements (usual classroom lessons, object-lessons, on-the-job training, workplace based lessons, training courses etc.).	8.1 Know the educational goals of the national legal educational framework and the subject specific curricula. 8.2 Know the content of the curricula areas to be taught and demonstrate subject specific literacy. 8.3 Know selected teaching methods, general didactic concepts and subject specific didactic concepts, and have skills in choosing appropriate methods and concepts to promote the learners' participation. 8.4 Demonstrate a good command of the vocational skills required for the curricula area being taught, and a basic understanding of hardware and software operations, required for the appropriate application of Information and Communication Technology (ICT). 8.5 Identify learners' baseline level of knowledge and skills, they have acquired in a formal or non-formal way, and use this information to design and formulate learning objectives, lesson plans, lesson content, and ordering of lesson content (learning sequences). 8.6 Organize the lesson content, learning sequences and teaching of specific concepts in a manner that promotes the use of a variety of learning methods (writing, reading, listening, speaking, doing etc.) to encourage active learning and critical thinking. 8.7 Demonstrate skills to prepare classroom and workshop

	environments, and to organize these environments to enable work process oriented training sequences. 8.8 Design lesson plans, learning sequences and lesson content in a way that supports learners in gaining work process oriented competencies. 8.9 Design lesson plans, learning sequences and lesson content by selecting and combining different content, didactic concepts, teaching methods, teaching media, and communication methods appropriate for learners' diversity and their stage of development. 8.10 Incorporate appropriate Information and Communication Technology (ICT) activities into lessons and learning sequences in a way that supports learners' acquisition of subject specific literacy, and encourages and enables learners to use ICT.
9. Giving lessons Teachers give lessons in a factual and professionally correct manner considering a wide range of different temporal and organizational arrangements.	9.1 Have a good command of teaching media, use and application of technical equipment and relevant Information and Communication Technology (ICT). 9.2 Use the advantages of new media and the Information and Communication Technology (ICT) where appropriate to support and improve the learning process. 9.3 Give lessons and conduct learning sequences as planned; listen and respond to learners' questions and needs, and adjust their understanding of teaching concepts where necessary.
10. Supporting the learning process Teachers support the learning process of learners.	10.1 Create a safe, clean and caring learning environment, which promotes an active, co-operative and self-determined way of learning, facilitating a high standard of learning performance. 10.2 Organize and sequence the lesson content in ways that promote the learning process of learners. 10.3 Know how different types of learners acquire knowledge and skills. 10.4 Address different types of learners in a supportive way when planning and giving lessons. 10.5 Facilitate learners in learning to know, learning to do, learning to live together and learning to be (The four Pillars of Education[9]). 10.6 Develop and utilize appropriate teaching and learning resources which promote in particular self-determined learning.
11. Motivating learners Teachers motivate learners and empower them to critically question new knowledge, draw connections and apply knowledge.	11.1 Know, convey and practice selected strategies of learning and self-motivation. 11.2 Know, convey and practice methods of self-determined, self-dependent, critical-thinking (analysis, synthesis, evaluation), and co-operative learning and working. 11.3 Inspire learners to become lifelong learners.

D. Competency Area of Assessment Teachers assess learners in a fair and responsible manner; they promote learners and provide advice to young people, parents, family members, caregivers etc.	
12. Considering individual preconditions	12.1 Know how different preconditions of individual learners affect the learning process and the interaction within the

[9] Cp. UNESCO (1996): Learning: The Treasure within. Online: http://collections.infocollections.org/ukedu/en/d/Jh1767e/3.1.html. Last accessed: 08.09.2012

Teachers diagnose the preconditions of learners and know how they learn. Teachers use this information to support learners and provide appropriate advice.	classroom and/or the workshop environment. 12.2 Identify the learners' baseline level of knowledge, their stage of development, their learning needs, their potential to learn and any learning obstacles. Use this information to plan teaching so the learner development can be promoted appropriately. 12.3 Recognize learning disabilities or other barriers, as well as special talents, and assist these learners appropriately. 12.4 Cooperate with colleagues and the school administration in guiding and counseling learners, parents, family members, caregivers etc.
13. Measuring learner performance Teachers measure the performance of learners based on transparent criteria and communicate the results in an appropriate way.	13.1 Have knowledge of the different types of assessment methods and tools. 13.2 Design assessment tools that correspond to learning goals (theoretical and practical), the learners' level of ability and understanding, and the taxonomy of learning objectives (e.g. Bloom[10]), particularly emphasizing critical thinking (analysis, synthesis, evaluation). 13.3 Assign meaningful homework in order for learners to deepen, apply, consolidate and practice newly acquired knowledge. Evaluate homework adequately to measure the learners' progress. 13.4 Communicate assessment results to learners within a reasonable period of time in a beneficial way that provides fair and encouraging feedback. 13.5 Analyze and interpret assessment results in order to plan for future teaching and learning processes. 13.6 Use assessment results and teachers' reflections for identifying necessary interventions and modifying teaching practice.

E. Competency Area of Self-Development and Innovation Teachers develop their knowledge and skills continually and make a valuable contribution to the development of their country.	
14. Accepting professional requirements Teachers are aware of the specific requirements of their profession and promote collaborative working amongst the staff team.	14.2 Use working hours and equipment, including the available Information and Communication Technology (ICT), in an effective, responsible and efficient manner to enhance productivity. 14.2 Have knowledge and strategies to deal with workload, stress and other work challenges. 14.3 Communicate, interact and co-operate with colleagues. 14.4 Work if possible in a team and support each other to prepare lesson content, ordering of lesson content (learning sequences) and to share workload within the teaching team.
15. Continuing professional development Teachers understand their profession as a lifelong learning process	15.1 Perform administrative work and complete documentation recording evidence of their own work and its results. 15.2 Apply selected methods for evaluating the teaching-learning process and identify areas of improvement in order to develop their own professional knowledge and practice. 15.3 Participate in self-evaluation and provide constructive feedback to colleagues. Integrate feedback into work practices to improve learning and teaching. 15.4 Know where to get assistance and use these opportunities

[10] Cp. Bloom, Benjamin et al. (1956): Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. New York

	to develop knowledge and skills. Provide assistance by coaching and mentoring colleagues, particularly student teachers and novices. 15.5 Acquire the comprehensive ability of learning to know, learning to do, learning to live together and learning to be (The four Pillars of Education[11]). 15.6 Use individual and group, formal and non-formal training opportunities on a regular basis to keep up to date with new professional developments and work practices in vocational education, as well as digital literacy and skills in the application of Information and Communication Technology (ICT). 15.7 Cooperate with colleagues to explore and contemplate contemporary educational issues and research to incorporate new knowledge into work practices.
16. Participating in innovation Teachers participate in the planning and implementation of school projects and development proposals.	16.1 Have knowledge of the guiding principles of the education law, the national educational policy and the technical and vocational education development strategy. 16.2 Have knowledge of the vision and mission of their school, and support their school in implementing activities that contribute to the development of the community, the district, the province and the country. 16.3 Support the educational policy of their country and the mission of their school and its various study courses in an active and innovative way. 16.4 Collect information about relevant stakeholders and their needs in relation to the school environment (community members, industry, companies / employers, general public etc.) and apply this information when planning and developing school services. 16.5 Support the school administration in developing the school in order to achieve its mission successfully. 16.6 Support the school administration in planning and realizing social and extracurricular activities and projects. 16.7 Support the school administration in integrating Information and Communication Technology (ICT) into school activities and in providing equitable access to all colleagues and learners.

[11] Cp. UNESCO (1996): Learning: The Treasure within. Online: http://collections.infocollections.org/ukedu/en/d/Jh1767e/3.1.html. Last accessed: 08.09.2012

7 Implementation of Standards for TVET Teacher Education

As described before, there is a lack of well-qualified vocational teachers and the standards are made to improve the quality of teachers and teaching at vocational schools in Lao.

The development of the standards will have been only useful if the standards are also applied. Therefore it is absolutely necessary to continue the work of developing standards and to ensure the implementation with emphasis.

For the implementation we propose three key elements:

- the appropriate dissemination of the standards
- the development of standard-based curricula and the accomplishment of these curricula at the university
- the establishment of a concept of mentoring at the vocational schools

The appropriate dissemination of the standards is the first crucial point. If the standards are permitted by the MoES it is important, not only to announce the standards, but to inform a lot of important actors of vocational education in the whole country. For the acceptance of the standards two groups - beside the already involved stakeholders - seem to be crucial: On the one hand the headmasters of vocational schools, and on the other hand the responsible staff of the provincial educational departments in Lao PDR.

Similarly, as with the participation of relevant stakeholders in the development process of the standards, it seems appropriate to inform these actors in a personal way face to face. In information sessions should be explained the goals of the standards and the process of development, and it should be discussed, how to reach the standards. The results of these sessions and talks can give some more hints how to strengthen the implementation of the standards.

The second and more institutional way to implement the standards concerns the system of higher education for vocational teachers. The developed standards for vocational teacher at bachelor level should have a direct impact of the education of these teachers. Therefore it is necessary to develop a new standard-based curriculum, based on the standards described in chapter 6. The MoES, in charge of the approval of new curricula in higher education, should only agree to such a

curriculum, if it is showing clearly in what way the standards are taken into account. This curriculum has to be considered as a national curriculum, mandatory for all institutions, educating vocational teachers at Bachelor level.

To apply the standard-based curriculum it is necessary to support the academic institutions. In particular we propose a coaching for lecturer for vocational education at the National University of Laos to strengthen their work process knowledge, in order to improve the quality of their lessons.

The development of the curriculum described above is necessary for the improvement of education quality of vocational teachers. But this is still not enough. Therefore we propose to establish a mentoring concept, accomplishing the standards at the vocational schools. This mentoring concept has to be focused on to different target groups working on the same institution, the vocational schools throughout Lao PDR. The first group consists of “fresh” graduates, who need a qualified support in the process of transition from university to professional life at their vocational school. The second group consists of “old” teachers, who need to be upgraded, considering the standards.

As mentors, experienced teachers are provided, which are experienced, but open to new developments. Suitable candidates should be nominated by their respective schools. They have to be prepared in a mentorship training for their new task. The mentor training also helps to implement the standards in the schools.

8 Final Remarks and Outlook

The study describes the process of development of standards for vocational teachers at bachelor level in Lao PDR and proposes actions for the following implementation process. The process of development was permanently based on theoretical foundation and has involved important stakeholders. So it is similar to the common process to develop standards (cp. Frey/Jung 2011).

With respect to the educational level, the drafted standards are applying for vocational teachers on bachelor level and the indicators are formulated accordingly. If in the future an extension will be possible and feasible, these standards might provide a good starting position, for instance to cover the master level as the next higher career opportunity.

The result – presented in chapter 6 – is a standard for vocational teachers at bachelor level in five different areas with altogether 80 indicators. It is to remark, that the development of standards for vocational teachers is a difficult process, because there a only a few comparable standards available, which could have served as a role model (cp. Wilbers 2010, p. 33). In this regard every state is challenged to develop specific standards for vocational teachers.[12]

Concerning the proposals for implementation (see Chapter 7) it is to remark, that there are no recorded documentations or evaluations concerning the process of implementation of standards for vocational teachers exist. This seems to be a remarkable research gap.

The standards for vocational teacher can be an important milestone improving the quality of TVET in Lao PDR, if it will be succeeded to implement them.

As mentioned in Chapter 3 it is necessary to review the developed standards periodically to prevent that they are going outdated. Therefore we strongly recommend conducting an evaluation of the standards in about five years. The evaluation should have two goals: First, it is to show which of the standards (as a whole standard or concerning single competencies or indicators) are appropriate and which are improbable or unrealistic. Secondly, it should be

[12] In Germany, for example, intensive discussions on how to formulate standards for vocational teacher are coming up.

reviewed, if the implementation was successful and in which way the application of the standards should be further supported.

In order to improve the quality of the education of vocational teachers in a sustainable way, we recommend furthermore to go beyond the measures already described, by complementing this top-down process with a bottom-up process. The fact, that the teachers at vocational schools are not sufficiently qualified, has been shown not only in different studies, but even the schools themselves see deficits - and they can describe them in many more details and regarding to their own needs. We therefore recommend to record a qualitative survey of different vocational schools (in urban and in rural areas) concerning these questions. In addition to the focus on the standards the results of such a study would provide valuable information for the improvement of curricula for the training and education of vocational teachers.

The research team is looking forward to witnessing the implementation of the standards. We thank everyone involved in doing this research, particularly

- the Faculty of Engineering at the University of Laos for the willingness to carry out the study and providing the required manpower;
- the Ministry of Education and Sports of Laos for commissioning the study and provide valuable information;
- vocational schools in Laos for communicating the specific needs of the demanding institutions;
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- the Regional Cooperation Platform for facilitating the exchange of experiences and expertise between its member institutes, crucial for the accomplishment of this study and providing scientific advice;
- the member institutes of RCP for providing valuable contribution and making their experience and expertise available.

The research team hopes that the aforementioned institutions benefit from the results of the study and receive a valuable reward for the provided support in terms of the developed standards.

9 References

ADB (2010a): Lao People's Democratic Republic: Strengthening Technical and Vocational Education and Training Project. Online: http://www.adb.org/sites/default/files/projdocs/2010/42278-02-lao-rrp.pdf. Last accessed: 16.12.2012

ADB (2010b): Labor Market Assessment (Strengthening Technical and Vocational Education and Training Project). Online http://www2.adb.org/Documents/RRPs/LAO/42278/42278-02-lao-oth-01.pdf. Last accessed: 16.12.2012

Beck, Klaus (2005): Standards für die Ausbildung von Berufsschullehrern in Europa – Professionalisierung im Kompetenzkorsett? Arbeitspapiere WP 52. Lehrstuhl für Wirtschaftspädagogik, Johannes Gutenberg-Universität Mainz.

Benveniste, Luis et al. (2007): Teaching in Lao PDR. Washington DC.

Bergmann, Herbert and Mulkeen, Aidan (2011): Standards for Quality in Education. Experiences from Different Countries and Lessons Learnt. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Eschborn. Online: http://www2.gtz.de/dokumente/bib-2011/giz2011-0093en-standards-quality-education.pdf. Last accessed: 23.11.2012.

Billet, Stephen (2009a): Changing work, work practice: The consequences for vocational education. In: Maclean, Rupert; Wilson, David N. (eds.): International handbook of education for the changing world of work. Dordrecht, London. p. 175-187

Billet, Stephen (2009b): Vocational learning: Contributions of workplaces and educational institutions. In: Maclean, Rupert; Wilson, David N. (eds.): International handbook of education for the changing world of work. Dordrecht, London. p. 1711-1725

Bloom, Benjamin et al. (1956): Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. New York.

CCSSO (2011): InTASC Model Core Teaching Standards: A Resource for State Dialogue, Washington DC.

Dittrich, Joachim (2010): Perspectives for intra-Asian cooperation in TVET. Pp. 242-253 in: Proceedings of the 2010 ASEAN-CHINA International Forum on Vocational Education and Training. Beijing.

Fischer, Martin; Boreham, Nick (2009): Work process knowledge. Pp. 466-474 in: Rauner, Felix; Maclean, Rupert (eds.): Handbook of Technical and Vocational Education and Training Research. Berlin.

Frey, Andreas; Jung Claudia (2011): Kompetenzmodelle und Standards in Lehrerbildung und Lehrerberuf. Pp. 540–572 in: Terhard, Ewald et al. (eds.): Handbuch der Forschung zum Lehrerberuf. Münster

Gerds, Peter (2009): Standards for occupation-directed professional development of TVET personnel in developing countries. Pp. 1407-1422 in: Maclean, Rupert; Wilson, David N. (eds.): International handbook of education for the changing world of work. Dordrecht, London.

Hartmann, Martin (2012): Berufsbild für Lehrkräfte berufsbildender Schulen als Grundlage für Lehrerprofessionalität. . In: Becker, Matthias; Spöttl; Georg; Vollmer, Thomas (eds.): Lehrerbildung in Gewerblich-Technischen Fachrichtungen. Bielefeld, p. 97–118. Bielefeld.

Hattie, John A. C. (2009): Visible Learning. A Synthesis of over 800 Meta-Analyses relating to Achievement. London, New York.

Klieme, Eckhard et al. (2007): Zur Entwicklung nationaler Bildungsstandards. Eine Expertise. Bundesministerium für Bildung und Forschung (BMBF), Referat Bildungsforschung, Berlin.

KMK (2004): Standards für die Lehrerbildung: Bildungswissenschaften. Beschluss der Kultusministerkonferenz vom 16.12.2004. Sekretariat der Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland. Online: http://www.kmk.org/fileadmin/veroeffentlichungen_beschluesse/2004/2004_12_16-Standards-Lehrerbildung.pdf. Last accessed: 19.4.2012.

KMK (w/o year): Standards für die Lehrerbildung: Bericht der Arbeitsgruppe. Sekretariat der Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland. Online: http://www.kmk.org/fileadmin/pdf/Bildung/AllgBildung/Standards_Lehrerbildung-Bericht_der_AG.pdf. Last accessed: 19.4.2012.

Lao People's Revolutionary Party (2011): IX Party Congress 2011 – Report, Vientiane

McWalters, Peter et al. (2010): Updating the INTASC Model Core Teaching Standards: What Does Effective Teaching Look Like Today? Online: http://www.pearsonassessments.com, Last accessed: 21.09.2012

MoE (2007): Strategic Plan for the Development of TVET from 2006 up to 2020, Vientiane

MoE (2008): National Education System Reform Strategy (NESRS) 2006–2015, Vientiane

MoE (2008a): The Development of Education, National Report: Lao People's Democratic Republic, 48th International Conference of Education, Geneva, 25-28 November 2008, Vientiane. Online: www.ibe.unesco.org/.../ICE.../laoPDR_NR08.pdf, Last accessed: 04.07.2012.

MoE (2009): Education Sector Development Framework (ESDF) 2009- 2015, Vientiane

MoE (2010): Decree No. 1232, Standards of Teachers, Vientiane

MoE (2011): Decree No. 976, Vocational Teacher Education Department, Vientiane

MoES (2012): National Standards of Curricula (Draft), Vientiane

MoLISA (2010): Circular No. 30/2010/TT, Professional Standard Regulation for Vocational Lecturers, Teachers, Hanoi

MPI (2010): Seventh National Socio-Economic Development Plan (2011-2015) – Draft, Executive Summary, unofficial translation from original Lao version, Vientiane

Nam News Network (2010): Laos is short of skilled Labour – ADB Study. Online: http://news.brunei.fm/2010/03/29/laos-is-short-of-skilled-labour-adb-study/. Last accessed: 19.08.2010.

Government of Lao PDR (2011): Higher Education to be further conducted. Online: http://www.laopdr.gov.la/ePortal/news/detail.action;jsessionid=gp1JTf1F1mtj26VFLm2KWnV13sv4Z9h3VsjhCJp1p72b4KW3MTj2!260949307?id=27089&from=ePortal_NewsDetail_FromHome. Last accessed: 30.08.2012.

PMO (2010): Decree No. 036, TVET and Skills Development, Vientiane

PMO (2012): Decree No. 177, Public Teachers, Vientiane

QualiVET Project Group (2007): Quality Development Framework (QDF). Guideline, Shaping Oriented Indicators, Team Concept. Impuls 31. Nationale Agentur beim Bundesinstitut für Berufsbildung. Bonn

Searle, Jean (2009): Literacy and Learning: Are TVET Professionals Facilitators of Learning or Deliverers of Knowledge and Skills? Maclean, Rupert; Wilson, David N. (eds.): International handbook of education for the changing world of work. Dordrecht, London, pp. 1259-1270

Singthilath, Thongdaeng (2012): Report on the previous Measures related to the Improvement of the Education of Vocational Teachers, presented during a workshop on the Development of Standards for the non-academic Education of Vocational Teachers, conducted by VEDC on 20th/21st March 2012, Thalat/Vientiane Province

SIREP (2010): Teaching Competency Standards in Southeast Asian Countries, Phillipine

Sisoulath, Soulikamkhone et al. (2007): Public Technical Vocational Schools under the Ministry of Education in Lao P.D.R., Vientiane

Soysouvanh, Boualinh et al. (2011): Institutional Development of Vocational Teacher Education in Lao PDR 2010–2020, Vientiane

Spöttl, Georg (2009): Teacher education for TVET in Europe and Asia: the comprehensive requirements. Journal of technical education and training, 1 (1). pp. 1-16. Online: http://eprints.uthm.edu.my/550/1/JTET_Vol1_F1.pdf. Last accessed: 3.10.2011.

Spöttl, Georg; Becker, Matthias (2012): Wissenschaftsbezüge und Standards für ein gewerblich-technisches Lehrerbildungsstudium. In: Becker, Matthias; Spöttl; Georg; Vollmer, Thomas (eds.): Lehrerbildung in Gewerblich-Technischen Fachrichtungen. Bielefeld, p. 35–64.

TDA (2007): Professional Standards for Teachers, London. Online: www.rbkc.gov.uk/pdf/standards_core.pdf. Latest accessed: 04.07.2012

TT-TVET Consortium (2009): Quality indicators and shaping measures as standards in TVET teacher education. In Dittrich et al. (eds): Standardization in TVET teacher education. Frankfurt and others. p. 151-162.

UNDP (2010): Country Program Strategy; GEF Small Grants Program Lao PDR

UNESCO (1996): Learning: The Treasure within. Online: http://collections.infocollections.org/ukedu/en/d/Jh1767e/3.1.html. Last accessed: 08.09.2012.

UNESCO (2011): UNESCO ICT Competency Framework for Teachers, Paris

UNESCO (2012): Technical and Vocational Education and Training (TVET), Policy Review of Lao PDR's TVET System – Draft

U.S. Department of State: http://www.state.gov/r/pa/ei/bgn/2770.htm. Last accessed: 03.06.2012.

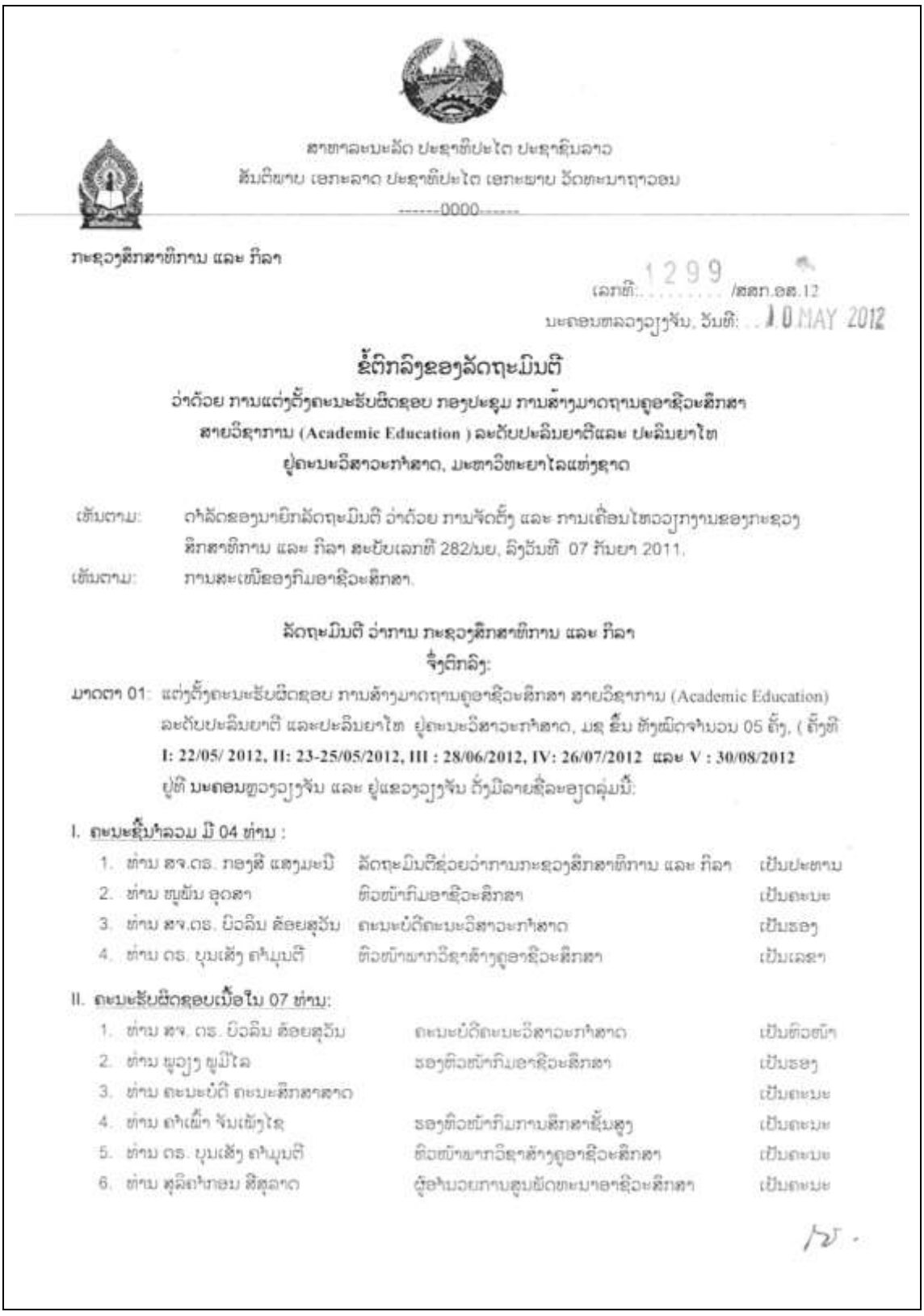
Wilbers, Karl (2010): Standards für die Aus- und Weiterbildung berufspädagogischer Professionals. In: Nickolaus et al. (eds.): Handbuch Berufs- und Wirtschaftspädagogik. Bad Heilbrunn, p. 33-36

World Bank (2010): Transforming Indonesia's Teaching Force. Volume II: From Pre-service Training to Retirement: Producing and Maintaining a High-quality, Efficient, and Motivated Workforce. Report No. 53732-ID, World Bank Office Jakarta.

Zhao, Zhiqun; Lu, Lianwei (2009): TVET teachers and their professionalization in China: A problem analysis. In Maclean, Rupert; Wilson, David (eds.): International handbook of education for the changing world of work. Dordrecht, London. p. 1229-1242

10 Annexes

10.1 Annex 1: MoES – Official Assignment for the Development of Standards for Vocational Teachers in Lao PDR



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ
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ກະຊວງສຶກສາທິການ ແລະ ກິລາ

ເລກທີ: 1299 /ສສກ.ອສ.12
ນະຄອນຫລວງວຽງຈັນ, ວັນທີ: 10 MAY 2012

ຂໍ້ຕົກລົງຂອງລັດຖະມົນຕີ

ວ່າດ້ວຍ ການແຕ່ງຕັ້ງຄະນະຮັບຜິດຊອບ ກອງປະຊຸມ ການສ້າງມາດຖານຄູອາຊີວະສຶກສາ ສາຍວິຊາການ (Academic Education) ລະດັບປະລິນຍາຕີແລະ ປະລິນຍາໂທ ຢູ່ຄະນະວິສາວະກຳສາດ, ມະຫາວິທະຍາໄລແຫ່ງຊາດ

ເຫັນຕາມ: ດຳລັດຂອງນາຍົກລັດຖະມົນຕີ ວ່າດ້ວຍ ການຈັດຕັ້ງ ແລະ ການເຄື່ອນໄຫວວຽກງານຂອງກະຊວງ ສຶກສາທິການ ແລະ ກິລາ ສະບັບເລກທີ 282/ນຍ, ລົງວັນທີ 07 ກັນຍາ 2011.

ເຫັນຕາມ: ການສະເໜີຂອງກົມອາຊີວະສຶກສາ.

ລັດຖະມົນຕີ ວ່າການ ກະຊວງສຶກສາທິການ ແລະ ກິລາ
ຈຶ່ງຕົກລົງ:

ມາດຕາ 01: ແຕ່ງຕັ້ງຄະນະຮັບຜິດຊອບ ການສ້າງມາດຖານຄູອາຊີວະສຶກສາ ສາຍວິຊາການ (Academic Education) ລະດັບປະລິນຍາຕີ ແລະປະລິນຍາໂທ ຢູ່ຄະນະວິສາວະກຳສາດ, ມຊ ຂຶ້ນ ທັງໝົດຈຳນວນ 05 ຄັ້ງ, (ຄັ້ງທີ I: 22/05/ 2012, II: 23-25/05/2012, III : 28/06/2012, IV: 26/07/2012 ແລະ V : 30/08/2012 ຢູ່ທີ ນະຄອນຫຼວງວຽງຈັນ ແລະ ຢູ່ແຂວງວຽງຈັນ ດັ່ງມີລາຍຊື່ລະອຽດລຸ່ມນີ້:

I. ຄະນະຊີ້ນຳລວມ ມີ 04 ທ່ານ :

1.	ທ່ານ ສຈ.ດຣ. ກອງສີ ແສງມະນີ	ລັດຖະມົນຕີຊ່ວຍວ່າການກະຊວງສຶກສາທິການ ແລະ ກິລາ	ເປັນປະທານ
2.	ທ່ານ ໜູພັນ ອຸດສາ	ຫົວໜ້າກົມອາຊີວະສຶກສາ	ເປັນຄະນະ
3.	ທ່ານ ສຈ.ດຣ. ບົວລົມ ຄ້ອຍສຸວັນ	ຄະນະບໍດີຄະນະວິສາວະກຳສາດ	ເປັນຮອງ
4.	ທ່ານ ດຣ. ບຸນເສັ້ງ ຄຳມຸນຕີ	ຫົວໜ້າພາກວິຊາສ້າງຄູອາຊີວະສຶກສາ	ເປັນເລຂາ

II. ຄະນະຮັບຜິດຊອບເນື້ອໃນ 07 ທ່ານ:

1.	ທ່ານ ສຈ. ດຣ. ບົວລົມ ຄ້ອຍສຸວັນ	ຄະນະບໍດີຄະນະວິສາວະກຳສາດ	ເປັນຫົວໜ້າ
2.	ທ່ານ ພູວຽງ ພູມີໄລ	ຮອງຫົວໜ້າກົມອາຊີວະສຶກສາ	ເປັນຮອງ
3.	ທ່ານ ຄະນະບໍດີ ຄະນະສຶກສາສາດ		ເປັນຄະນະ
4.	ທ່ານ ຄຳເພົ້າ ຈັນເພັງໄຊ	ຮອງຫົວໜ້າກົມການສຶກສາຊັ້ນສູງ	ເປັນຄະນະ
5.	ທ່ານ ດຣ. ບຸນເສັ້ງ ຄຳມຸນຕີ	ຫົວໜ້າພາກວິຊາສ້າງຄູອາຊີວະສຶກສາ	ເປັນຄະນະ
6.	ທ່ານ ສຸລິຍາທອນ ສີສຸວາດ	ຜູ້ອຳນວຍການສູນພັດທະນາອາຊີວະສຶກສາ	ເປັນຄະນະ

7. ທ່ານ ສົມລິດ ວິຣິວົງ ຜູ້ອຳນວຍການໂຮງຮຽນເຕັກນິກ ລາວ-ເຢັຈລະມັນ ເປັນຄະນະ

III. ຜູ້ຊ່ວຍວຽກ 04 ທ່ານ ຈາກຄະນະວິສາວະກຳສາດ:

1. ທ່ານ ສົມສະນິດ ລາວັນ
2. ທ່ານ ຫ່ານນະວົງ ບຸນຕາສຸກ
3. ທ່ານ ນ. ສຸກາພເສີມ ສະເຫຼີມສີ
4. ທ່ານ ນ. ແສງມະນີ ພຸ່ນພົມມະລິນ

ມາດຕາ 02: ລັດຖະກອນຖະກອນທີ່ບົ່ງໄວ້ໃນມາດຕາ 01 ມີໜ້າທີ່ຊີ້ນຳໆພາຈັດຕັ້ງກອງປະຊຸມ, ຮັບຜິດຊອບຕາມສິດ ແລະ ໜ້າທີ່ຂອງໃຜລາວ ເຮັດໃຫ້ວຽກງານສຳເລັດຜົນຕາມຄາດໝາຍ ແລະ ພາຍຫຼັງສຳເລັດກອງປະຊຸມ ແລ້ວໃຫ້ລາຍງານຂັ້ນເທິງຕາມເວລາອັນຄວນ, ລັດຖະກອນທີ່ລະບຸໄວ້ໃນມາດຕາ: 01 ມີສິດໄດ້ຮັບນະໂຍບາຍຕາມລະບຽບຫລັກການໆເງິນວາງອອກ.

ມາດຕາ 03: ກອງປະຊຸມ ການສ້າງມາດຖານ ຄຸອາຊີວະສຶກສາໃນຄັ້ງນີ້ ແມ່ນນຳໃຊ້ງົບປະມານຈາກໂຄງການ **HRD ME** ແຫ່ງ ປະເທດ ເຢັຈລະມັນ ແລະ ໂຄງການ **Regional Co-0peration Platform (RCP)**.

ມາດຕາ 04: ໃຫ້ຫ້ອງກະຊວງການສຶກສາທິການ ແລະ ກິລາ,ກົມຈັດຕັ້ງ-ພະນັກງານ,ກົມການເງິນ,ກົມອາຊີວະສຶກສາ, ກົມການສຶກສາຊັ້ນສູງ ,ຄະນະວິສາວະກຳສາດ,ມະຫາວິທະຍາໄລ ແຫ່ງຊາດ ແລະ ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ຈົ່ງພ້ອມກັນ ປະຕິບັດ ຂໍ້ຕົກລົງ ສະບັບນີ້ ຕາມໜ້າທີ່ຂອງໃຜລາວ.

ມາດຕາ 05: ຂໍ້ຕົກລົງສະບັບນີ້ ມີຜົນສັກສິດນຳໃຊ້ ນັບແຕ່ວັນທີລົງລາຍເຊັນເປັນຕົ້ນໄປ.

ລັດຖະມົນຕີວ່າການກະຊວງສຶກສາທິການ ແລະ ກິລາ,

ບ່ອນຮັບ:
- ຫ້ອງການກະຊວງສຶກສາທິການ ແລະ ກິລາ 02 ສະບັບ
- ກົມຈັດຕັ້ງ-ພະນັກງານ 01 ສະບັບ
- ກົມການເງິນ 01 ສະບັບ
- ກົມການສຶກສາຊັ້ນສູງ 01 ສະບັບ
- ກົມອາຊີວະສຶກສາ 01 ສະບັບ
- ຄະນະວິສະວະກຳສາດ,ມຊ 01 ສະບັບ
- ພາກວິຊາກ່ຽວຂ້ອງເກັບມ້ຽນ 02 ສະບັບ

ຮສ.ດຣ ກອງສີ ແສງມະນີ

10.2 Annex 2: National Qualification Framework (NQF) – Aspects and Descriptors

Level 1:

Aspects	**Descriptors**
Knowledge And Understanding	Demonstrate and/or work with knowledge of simple facts and ideas in a subject/discipline.
Practice: Applied Knowledge And Understanding	• Relate knowledge to a few simple everyday contexts with prompting. • Use a few very simple skills. • Carry out, with guidance, a few familiar tasks. • Use, under supervision, basic tools and materials.
Generic Cognitive Skills	• Use rehearsed stages for solving problems. • Operate in personal and/or everyday contexts. • Take some account, with prompting, of identified consequences of action.
Communication, ICT and Numeracy skills	Use very simple skills with assistance, for example: • Produce and respond to a limited range of very simple written and oral communication in familiar/routine contexts. • Carry out a limited range of very simple tasks to process data and access information. • Use a limited range of very simple and familiar numerical and graphical data in familiar and everyday contexts.
Autonomy, accountability and working with others	• Work alone or with others on simple routine, familiar tasks under frequent and directive supervision. • Identify, given simple criteria, some successes and/or failures of the work

Level 2:

Aspects	**Descriptors**
Knowledge and understanding	Demonstrate and/or work with: • Basic knowledge in a subject/discipline. • Simple facts and ideas associated with a subject/discipline.
Practice: applied knowledge and understanding	Relate knowledge with some prompting to personal and/or everyday
Generic cognitive skills	• Identify with some prompting a process to deal with a situation or issue. • Operate in familiar contexts using given criteria. • Take account of some identified consequences of action.
Communication, ICT and numeracy skills	Use simple skills, for example: • Produce and respond to simple written and oral communication in familiar, routine contexts. • Carry out simple tasks to process data and access information. • Use simple numerical and graphical data in everyday contexts.
Autonomy, accountability and working with others	• Participate in the setting of goals, timelines, etc. • Participate in the review of completed work and the identification of ways of improving practices and processes. • Identify, given simple criteria, own strengths and weaknesses relative to the work.

Level 3:

Aspects	Descriptors
Knowledge and understanding	Demonstrate and/or work with: • Basic knowledge in a subject/discipline which is mainly factual. • Some simple facts and ideas about and associated with a subject/discipline. • Knowledge of basic processes, materials and terminology.
Practice: applied knowledge and understanding	• Relate knowledge to personal and/or practical contexts. • Use a few skills to complete straightforward tasks with some non-routine elements. • Select and use, with guidance, appropriate tools and materials safely and effectively.
Generic cognitive skills	• Use, with guidance, given stages of a problem-solving approach to deal with a situation or issue. • Operate in straightforward contexts. • Identify and/or take account of some of the consequences of action/ inaction.
Communication, ICT and numeracy skills	Use straightforward skills, for example: • Produce and respond to simple but detailed written and oral communication in familiar contexts. • Use the most straightforward features of familiar applications to process and obtain information. • Use straightforward numerical and graphical data in straightforward and familiar contexts.
Autonomy, accountability and working with others	• Work alone or with others on straightforward tasks. • Contribute to the setting of goals, timelines, etc. • Contribute to the review of completed work and offer suggestions for improving practices and processes. • Identify own strengths and weaknesses relative to the work.

Level 4:

Aspects	Descriptors
Knowledge and understanding	Demonstrate and/or work with: • Basic knowledge in a subject/discipline which is mainly factual but has some theoretical component. • A range of simple facts and ideas about and associated with a subject/discipline. • Knowledge and understanding of basic processes, materials and terminology.
Practice: applied knowledge and understanding	• Relate ideas and knowledge to personal and/or practical contexts. • Complete some routine and non-routine tasks using knowledge associated with a subject/ discipline. • Plan and organise both familiar and new tasks. • Select appropriate tools and materials and use safely and effectively (e.g. without waste). • Adjust tools where necessary following safe practices.
Generic cognitive skills	• Use a problem-solving approach to deal with a situation or issue that is straightforward in relation to a subject/discipline. • Operate in a familiar context, but where there is a need to take account of or use additional information of different kinds, some of which will be theoretical or hypothetical. • Use some abstract constructs - for example make generalisations and/or draw conclusions.

Communication, ICT and numeracy skills	Use a range of routine skills, for example: • Produce and respond to detailed written and oral communication in familiar contexts. • Use standard applications to process, obtain and combine information. • Use a range of numerical and graphical data in straightforward context that have some complex features.
Autonomy, accountability and working with others	• Work alone or with others on tasks with minimum supervision. • Agree goals and responsibilities for self and/or work team with manager/ supervisor. • Take leadership responsibility for some tasks. • Show an awareness of others' roles, responsibilities and requirements in carrying out work and make a contribution to the evaluation and improvement of practices and processes.

Level 5:

Aspects	**Descriptors**
Knowledge and understanding	Demonstrate and/or work with: · Generalised knowledge of a subject/discipline; · Factual and theoretical knowledge. · A range of facts, ideas, properties, materials, terminology, practices, techniques about/associated with a subject/discipline. Relate the subject/discipline to a range of practical and/or everyday applications.
Practice: applied knowledge and understanding	· Apply knowledge and understanding in known, practical contexts. · Use some of the basic, routine practices, techniques and/or materials associated with a job/ in routine contexts which may have non-routine elements. · Plan how skills will be used to address set situations and/or problems and adapt these as necessary.
Generic cognitive skills	· Obtain, organise and use factual and theoretical information in problem solving. · Make generalisations and predictions. · Draw conclusions and suggest solutions.
Communication, ICT and numeracy skills	· Use a wide range of skills, for example: · Produce and respond to detailed and relatively complex written and oral communication in both familiar and unfamiliar contexts. · Select and use standard applications to process, obtain and combine information. · Use a wide range of numerical and graphical data in routine contexts which may have non-routine elements.
Autonomy, accountability and working with others	· Take responsibility for carrying out of a range of activities where the overall goal is clear, under non-directive supervision. · Take some supervisory responsibility for the work of others and lead established teams in the implementation of routine work. · Manage limited resources within defined and supervised areas of work. · Take account of roles and responsibilities related to the tasks being carried out and take a significant role in the evaluation of work and the improvement of practices and processes.

10.3 Annex 3: Education Sector Development Framework (ESDF) – legal Regulations

No.	Reg.No / Name	Promulgated by	Short description of the content
1.	No. 35/PM Vientiane, 04 April 2002 **Decree on nomination of the NTC members**	Prime Minister	• Mandate of NTC • Nomination of president, vice-presidents and members of NTC • Establishment and venue of NTC-Permanent Office • Rights and obligations of NTC President and Vice Presidents
2.	No. 1327/NTC.02 Vientiane, 09 September 2002 **Decree on the Structure, the Tasks and Functions of NTC**	President of NTC and Minister of Education	1. Elaboration of policy and guidelines for the development of VET, 2. Elaboration of policy and guidelines for the financing of VET, 3. Elaboration of suggestion for the establishment and management of the "National Vocational Training Fund" 4. Discussion of the master plan for the development of VET, 5. Elaboration of national professional standards, curricula, examination and certification standards, 6. Discussion of plans for the establishment and development of technical and vocational schools according to the criteria of MoE, 7. Discussion of national plans for qualification and further qualification of vocational teachers and trainers and regulation of social positioning of vocational teachers/trainers.
3.	Decree of NTC President No. 425/NTC/03 Vientiane, 20.03.03 **Establishment of Trade Working Groups (TWG)**	President of NTC and Minister of Education	• Composition of TWG • Role, rights and tasks of TWG • Working principles • Regulations for implementation
4.	Reg. No: 04 NA Vientiane, Date: 03.07.2007 **Law on Education**	NA, President of Lao PDR	• General provisions • Education system • Education institutions • Education curricula • Learners • Education personnel • Society and education • Investment in education • Administration, inspection and Assessment of education

5.	Reg. No. 137/PM
	Vientiane, Datum: 03.05.2007
	
	Strategic Plan for Development of Technical, Vocational Education and Training up to 2020
		PMO	• Visions, Goals
			• Strategy for Development TVET
			  ○ Construction, improvement and expansion of TVET institutions
			  ○ TVET reform
			  ○ pre-service and in-service training and development of TVET teacher and administrative personnel
			  ○ TVET quality assurance
			  ○ Development of TVET Information System
			  ○ Improvement of TVET management apparatus
			  ○ Formulation of policy and establishment of management mechanisms for TVET development
			• Measures for the Implementation

6.	Reg.2016./PMO Vientiane, Datum: 17.11.2008 **Approval of Master Plan for TVET Development of Lao PDR 2008-2015**		• The construction, upgrading and expansion of the TVET Institutions; • The qualifications, training and professional development of TVET teachers and other staff; • The quality assurance of TVET; • The development of TVET information resources; • The improvement of the organizational structure of the TVET sector; • The formulation of policy and tools at the macro-level for the development of TVET • Financing for TVET Development
7.	Release No. 2354/MoE-VT 2004 **Standard for curricula**	Minister of Education	• Vocational training • Prerequisites for access • Duration of training • Contents of training • Ratio between theory and practice • Credit point system • Examination and certification
8.	MoE, 2002 **The Education strategic vision up to 2020** **Vientiane, Lao PDR** **October 2000**	**Minister of Education**	• Overall Directives • Overall Objectives • Overall Policy • Overall Targets • Methods

10.4 Annex 4: England (TDA) – Professional Standards for Teachers (short version)

Training and Development Agency for Schools (TDA), September 2007

These professional standards provide the **framework for a teacher's career** and clarify the **professional characteristics** that a teacher should be expected to maintain and to build on at their current career stage. Therefor they are statements of a teacher's **professional attributes**, **professional knowledge and understanding**, and **professional skills**. The standards for Post Threshold Teachers, Excellent Teachers and ASTs are **pay standards** and teachers who are assessed as meeting them also access the relevant pay scale.

	Professional Attributes				**Professional knowledge and understanding**						**Professional skills**					
Career stages	Relationships with children and young people	Frameworks	Communicating and working with others	Personal professional development	Teaching and learning	Assessment and monitoring	Subjects and curriculum	Literacy, numeracy and ICT	Achievement and diversity	Health and well-being	Planning	Teaching	Assessing, monitoring and giving feedback	Reviewing teaching and learning	Learning environment	Team working and collaboration
QTS (Q)	Q1-2	Q3	Q4-6	Q7-9	Q10	Q11-13	Q14-15	Q16-17	Q18-20	Q21	Q22-24	Q25	Q26-28	Q29	Q30-31	Q32-33
Those recommended for the award of QTS should:	Demonstrate the positive values, attitudes and behaviour they expect from children and young people.	Be aware of the professional duties of teachers and the statutory framework within which they work.	Communicate effectively with children, young people, colleagues, parents and carers.	Act upon advice and feedback and be open to coaching and monitoring.	Have a (…) understanding of a range of teaching (…) strategies and know how to use and adapt them, (…).	Know the assessment requirements and arrangements fort he subjects (…) they are trained to teach, (…).	Have a secure knowledge and understanding of their subject (…) and related pedagogy (…).	Know how to use skills in literacy (…) to support their teaching and wider professional activities.	Understand how children (…) develop and that the progress and well-being of learners are affected by (…).	Be aware of the current legal requirements (…) on the safeguarding (…) of the well-being (…).	Plan homework (…) to sustain learners' progress and to extend and consolidate their learning.	Teach lessons and sequences of lessons across the age and ability range for which they are trained (…).	Make effective use of a range of assessment, monitoring and recording strategies.	Provide timely, accurate and constructive feedback on learners' attainment, progress (…).	Establish a purposeful and safe learning environment (…).	Work as a team member and identify opportunities for working with colleagues (…).
Core(C)	C1-2	C3	C4-6	C7-9	C10	C11-14	C15-16	C17	C18-21	C22-25	C26-28	C29-30	C31-34	C35-36	C37-39	C40-41
PT (P)		P1			P2	P3-4	P5			P6	P7	P8				P9-10
ET (E)		E1		E2	E3	E4	E5		E6		E7	E8-9	E10-11	E12		E13-15
AST (A)		A1														A2-3

QTS: Qualified Teacher Status; **C**: Core; **PT**: Post Threshold Teachers; **ET**: Excellent Teachers; **AST**: Advanced Skills Teachers

10.5 Annex 5: Germany (KMK) – Standards für die Lehrerbildung: Bildungswissenschaften (short version)

<table>
<tr><td colspan="8">Decision of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (16th December 2004)</td></tr>
<tr><td colspan="8">Standards in teacher education describe requirements imposed on the acting of teachers. They are related to competencies and thus to abilities, skills and attitudes, teachers have to have to their disposal to tackle their professional requirements. The teacher education in Germany is divided into two phases, the academic phase (at University) and the practical phase (at School). The following catalogue of standards distinguishes as well between these both phases.</td></tr>
<tr><td colspan="2">Area of Competence: Teaching</td><td colspan="2">Area of Competence: Educating</td><td colspan="2">Area of Competence: Assessing</td><td colspan="2">Area of Competence: Innovating</td></tr>
<tr><td colspan="2">Teachers are experts for teaching and learning.</td><td colspan="2">Teachers exercise their educational task.</td><td colspan="2">Teachers exercise their assessment task in a fair and responsible manner.</td><td colspan="2">Teachers develop their skills constantly.</td></tr>
<tr><td colspan="2">Competency 1: Teachers plan lessons professionally and appropriately and carry out these lessons in a factual and professional correct manner.</td><td colspan="2">Competency 4: Teachers know the social and cultural living conditions of learners and influence their individual development within the context of school.</td><td colspan="2">Competency 7: Teachers diagnose learning preconditions and learning processes of learners; they support learners well-directed and advise learners and their parents.</td><td colspan="2">Competency 9: Teachers are aware of the specific requirements of their profession. They understand their profession as a public office, encompassing specific responsibilities and obligations.</td></tr>
<tr><td>Standards of the academic phase
<u>Example:</u>
Graduates not only know general and subject-oriented didactics, but also know what has to be considered preparing a lesson.</td><td>Standards of the practical phase
<u>Example:</u>
Graduates connect subject-specific and didactical criteria whilst preparing and designing lessons.</td><td>Standards of the academic phase
<u>Example:</u>
Graduates know intercultural dimensions, which has to be considered designing educational processes.</td><td>Standards of the practical phase
<u>Example:</u>
Graduates observe the cultural and social diversity in the relevant study group.</td><td>Standards of the academic phase
<u>Example:</u>
Graduates know how different learning conditions affect teaching and learning and how these conditions have to be taken into account</td><td>Standards of the practical phase
<u>Example:</u>
Graduates recognize stages of development, learning potentials, learning obstacles and learning progresses.</td><td>Standards of the academic phase
<u>Example:</u>
Graduates know know the main findings of mental stress research.</td><td>Standards of the practical phase
<u>Example:</u>
Graduates learn how to deal with stress.</td></tr>
<tr><td colspan="2">Competency 2: Teachers support the learning process of learners through</td><td colspan="2">Competency 5: Teachers impart values and standards and support</td><td colspan="2">Competency 8: Teachers record the performance of learners based on</td><td colspan="2">Competency 10: Teachers understand their profession as a</td></tr>
</table>

the design of appropriate learning situations. They motivate learners and empower them to draw connections and to apply their knowledge.		*self-determined decision-making and acting of learners.*		*transparent criteria.*		*constant learning process.*	
Standards of the academic phase ***Example:*** *Graduates know Teachers know learning theories and different ways of learning.*	***Standards of the practical phase*** ***Example:*** *Graduates encourage different ways of learning, and support their application.*	***Standards of the academic phase*** ***Example:*** *Graduates know and reflect democratic values and standards and have the knowledge, how to impart them.*	***Standards of the practical phase*** ***Example:*** *Graduates reflect on values and standards and act accordingly.*	***Standards of the academic phase*** ***Example:*** *Graduates know the principles of how to feedback the results of performance assessments.*	***Standards of the practical phase*** ***Example:*** *Graduates give reasons for ratings and reviews and show perspectives for further learning.*	***Standards of the academic phase*** ***Example:*** *Graduates know methods of self- and external evaluation.*	***Standards of the practical phase*** ***Example:*** *Graduates reflect on their own professional experiences and competencies and draw conclusions accordingly.*
Competency 3: *Teachers support the ability of learners to learn and work self-determined.*		***Competency 6:*** *Teachers find approachs to solve difficulties and conflicts in schools and in education processes.*				***Competency 11:*** *Teachers participate in the planning and implementation of school projects and development proposals.*	
Standards of the academic phase ***Example:*** *Graduates know learning and self-motivation strategies that affect positively on learning results and work outcomes.*	***Standards of the practical phase*** ***Example:*** *Graduates impart different learning and working strategies and support their application.*	***Standards of the academic phase*** ***Example:*** *Graduates have knowledge about communication and interaction (in particular considering the teacher-learner interaction)*	***Standards of the practical phase*** ***Example:*** *Graduates create social relations and social learning processes within their teaching.*			***Standards of the academic phase*** ***Example:*** *Graduates know know the objectives and methods of school development.*	***Standards of the practical phase*** ***Example:*** *Graduates apply methods and instruments of internal evaluation of the teaching and the school itself.*
11 Standards	**10 Standards**	**11 Standards**	**9 Standards**	**7 Standards**	**12 Standards**	**10 Standards**	**14 Standards**

10.6 Annex 6: Lao PDR (MoE) – Standards for (general) Teachers (short version)

Ministry of Education, Decree No 1232 (03rd June 2010)		
Handed over to the Teacher Training and Education Department, Provincial Education Divisions, Teaching Development Center and the National Teacher Training and Education Institute to implement the Standard o teachers effectively.		
Group of Characteristics **A**	Group of Characteristics **B**	Group of Characteristics **C**
Attributes and Ethics	**Knowledge about Learners**	**Knowledge and Ability in Teaching**
1. Be confident and/or familiar with the communist ideals and the politics and directions of the Lao government. **Indicators 1–5**	**10.** Have knowledge about the development of learners. **Indicators 44–47**	**15.** Teach according to national curricula and create local curricula. **Indicators 66–71**
2. Believe in national traditions and treat all students equally, without regarding gender, social origin, culture, language, religion and ethnicity. **Indicators 6–10**	**11.** Have knowledge about the basic rights of children. **Indicators 48–51**	**16.** Gain competent knowledge in major subjects, and in subjects being responsible for and know how to implement new knowledge into the teaching – learning process. **Indicators 72–76**
3. Consider the differences between students and motivate them to respect each other. **Indicators 11–15**	**12.** Understand the impact of the environment and health on the education of the learners. **Indicators 52–56**	**17.** Select and use suitable teaching media. **Indicators 77–79**
4. Have a conception of life, which can serve as a role model for the students. **Indicators 16–20**	**13.** Know that learners are able to study in many different ways and know how to adapt a broad range of various teaching – learning methods. **Indicators 57–61**	**18.** Create a stimulating environment to motivate students to learn by themselves both inside and outside the classroom. **Indicators 80–84**
5. Pay attention to students so that they gain a lot of knowledge and finish their education successfully. **Indicators 21–24**	**14.** Support students who need special attention. **Indicators 62–65**	**19.** Lessons must be interested by students and continue. Teachers always realize students' education is core. **Indicators 85–88**
6. Develop yourself to be prepared for new developments and be responsible for your students' learning results. **Indicators 25–29**		**20.** Use many methods to evaluate the students' learning results and apply the results to improve your teaching plan. **Indicators 89–92**

7. Keep in touch with colleagues, students, parents and other members of the society to tackle upcoming challenges together. **Indicators 30–33**		**21.** Evaluate the students' learning success according to criteria determined in the national curricula. **Indicators 93–97**
8. Understand the rights and duties of parents and encourage them to improve the education of the students. They are also responsible for the development and education of their children. **Indicators 34–38**		**22.** Record the students' learning results systematically. **Indicators 98–103**
9. Act as an ethical role model for the society and contribute in the support of the diversity of art, culture, tradition on a local as well as on a national level. **Indicators 39–43**		**23.** Improve your teaching by evaluating yourself and accept observations and recommendations from other people. **Indicators 104–108**
		24. Monitor classes effectively. **Indicators 109–111**
		25. Create a good atmosphere in the class to motivate students to learn. **Indicators 112–116**
		26. Take care for a good relationship between teachers and students. **Indicators 117–121**
		27. Encourage students to maintain relationships and to help each other. **Indicators 122–126**
		28. Ensure students to learn independently and within a group. **Indicators 127–131**
		29. Make yourself familiar with the various cultures and learn the ethnic languages spoken in the area where your workplace is located. **Indicators 132–136**

10.7 Annex 7: USA (CCSSO) – InTASC Model Core Teaching Standards (short version)

<table>
<tr><td colspan="4">InTASC Model Core Teaching Standards: A Resource for State Dialogue (April 2011)</td></tr>
<tr><td colspan="4">The Council of Chief State School Officers (CCSSO), through its Interstate Teacher Assessment and Support Consortium (InTASC), is pleased to offer this set of model core teaching standards that outline what teachers should know and be able to do to ensure every K-12 student reaches the goal of being ready to enter college or the workforce in today's world. These standards outline the common principles and foundations of teaching practice that cut across all subject areas and grade levels and that are necessary to improve student achievement.</td></tr>
<tr><th>Category 1</th><th>Category 2</th><th>Category 3</th><th>Category 4</th></tr>
<tr><td>The Learner and Learning</td><td>Content</td><td>Instructional Practice</td><td>Professional Responsibility</td></tr>
<tr>
<td>Standard #1: Learner Development
The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.
• Performances (a–c)
• Essential Knowledge (d–g)
• Critical Dispositions (h–k)</td>
<td>Standard #4: Content Knowledge
The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.
• Performances (a–i)
• Essential Knowledge (j–n)
• Critical Dispositions (o–r)</td>
<td>Standard #6: Assessment
The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.
• Performances (a–i)
• Essential Knowledge (j–p)
• Critical Dispositions (q–v)</td>
<td>Standard #9: Professional Learning and Ethical Practice
The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.
• Performances (a–f)
• Essential Knowledge (g–k)
• Critical Dispositions (l–o)</td>
</tr>
</table>

Standard #2: *Learning Differences* ***The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.*** • Performances (a–f) • Essential Knowledge (g–k) • Critical Dispositions (l–o)	***Standard #5:*** *Application of Content* ***The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.*** • Performances (a–h) • Essential Knowledge (i–p) • Critical Dispositions (q–s)	***Standard #7:*** *Planning for Instruction* ***The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.*** • Performances (a–f) • Essential Knowledge (g–m) • Critical Dispositions (n–q)	***Standard #10:*** *Leadership and Collaboration* ***The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.*** • Performances (a–k) • Essential Knowledge (l–o) • Critical Dispositions (p–t)
Standard #3: *Learning Environments* ***The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.*** • Performances (a–h) • Essential Knowledge (i–m) • Critical Dispositions (n–r)		***Standard #8:*** *Instructional Strategies* ***The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.*** • Performances (a–1) • Essential Knowledge (m–o) • Critical Dispositions (p–s)	
32 Indicators	**37 Indicators**	**58 Indicators**	**35 Indicators**

10.8 Annex 8: SR Vietnam (MoLISA) – Professional Standard Regulation for Vocational Lecturers, Teachers (short version)

CIRCULAR No 30/2010/TT: **Professional Standard Regulation for vocational lecturers, teachers** (*September 29th, 2010)*			
"Professional standard for vocational lecturers, teachers" is the system of basic requirements on the quality political, ethics, lifestyle, and professional capacity that teachers, trainers should achieve to meet vocational training objectives.			
Criteria 1	**Criteria 2**	**Criteria 3**	**Criteria 4**
Political quality, professional ethics, lifestyle and behavior	Professional capacity	Professional pedagogy capacity	Professional development capacity, scientific research ability
Standard 1: *Political quality* ***Indicator a) – d)*** *a) To strictly abide the guidelines of the Party, policies and laws of the State;*	***Standard 1:*** *Expertise* ***Indicator a) – d)*** *c) Knowledge of related subject;*	***Standard 1:*** *Level of vocational training pedagogy, teaching time* ***Indicator a) – b)*** *b) Participate in teaching at least 1 year.*	***Standard 1:*** *Exchanging experiences, learning, upgrading, training* ***Indicator a) – d)*** *- Regular self-study, retraining, practice to promote professional ethics, professional qualifications.*
Standard 2: *Professional ethics* ***Indicator a) – d)*** *b) Dedicated to the job; comply with rules, regulations of the vocational institutions, sector;*	***Standard 2:*** *Professional skill* ***Indicator a) – d)*** *d) Understand technical safety, occupational health of the profession.*	***Standard 2:*** *Preparation for teaching activities* ***Indicator a) – d)*** *b) Lesson plans are prepared in accordance with regulation, demonstrate teaching and learning activities;*	***Standard 2:*** *Scientific research ability* ***Indicator a) –b)*** *- Basic knowledge and skills on scientific research and technology.*
Standard 3: *Life style and behavior* ***Indicator a) – c)*** *a) Ideally living, purpose, will of rise up, the spirit to strive continuously with clear motivation and creative thinking, performance of thrift, honesty and righteousness, public-mindedness following the morality mirror of Ho Chi Minh*		***Standard 3:*** *Implement teaching* ***activities*** ***Indicator a) – d)*** *b) Implementation of theoretical teaching hours/practice/integrated, ensuring standard of knowledge, skill and attitudes as prescribed;*	
		Standard 4: *Examine and evaluate learning outcomes of learners* ***Indicator a) – b)***	

		a) To select and design tools to test and evaluate the learners' outcomes of knowledge, skills and attitudes consistent with the subject, module assigned to teach.	
		Standard 5: *Management of teaching records* ***Indicator a) – b)*** *b) Preservation, storage and use of teaching records following regulation.*	
		Standard 6: *Construction program, compiling curricula, teaching materials* ***Indicator c) – d)*** *c) Understand the basis, principles, requirements and processes of program development of vocational training at college level.*	
		Standard 7: *Plan construction and implement educational activities* ***Indicator a) – d)*** *- Develop plan of education learner through teaching and other activities.*	
		Standard 8: *Management of learner, development environmental education, learning* ***Indicator a) – b)*** *- Develop environmental education, learning healthily, convenient, democracy and cooperation.*	
		Standard 9: *Social activities* ***Indicator a) – b)*** *- In coordination with learners' families and community to encourage, support and supervise the learning, training of learners; contributing to mobilize social resources to build, develop vocational training institutions.*	
11 Indicators	**8 Indicators**	**24 Indicators**	**6 Indicators**

10.9 Annex 9: SIREP – Teaching Competency Framework for SEAMEO Countries

	General Areas of Responsibility / Competency	Specific Tasks / Competencies							
A	**Facilitating the development of learners' life and career skills**	A.1 Equip oneself with knowledge, skills, attitudes and values of the 21st century *15.5, 15.6, 15.7*	A.2 Facilitate development of students' Learning to Know knowledge, skills, attitudes and values *10.5*	A.3 Facilitate development of students' Learning to Do knowledge, skills, attitudes and values *10.5*	A.4 Facilitate development of students' Learning to Be knowledge, skills, attitudes and values (e.g. emotional intelligence) *10.5*	A.5 Facilitate development of students' Learning to Live Together knowledge, skills, attitudes and values *10.5*	A.6 Assess students' knowledge, skills, values and attitudes on the 4 pillars of education *10.5*		
B	**Facilitating learning**	B.1 Acquire mastery of subject matter *8.2*	B.2 Employ strategies that cater to students' learning styles and to elicit active learning *8.6, 8.8*	B.3 Communicate at learners' level *8.9*	B.4 Promote students' participation and collaboration *8.3*	B.5 Apply questioning and reacting skills *11., 11.2*	B.6 Integrate HOTS in the lesson *8.6*	B.7 Contextualize teaching to local situations *8.5*	B.8 Manage classroom activities *7.*
C	**Preparing appropriate lesson plans in line with the school vision and mission** *16.2*	C.1 Assess existing learning needs *12.2*	C.2 Formulate specific learning objectives incorporating knowledge, skills, attitudes and values, if applicable *8.5*	C.3 Prepare lesson plan based on syllabus and time frame *8.5, 8.8, 8.9*	C.4 Consider diversity of learners in preparing lesson plans *8.9*	C.5 Select the right methodologies according to subjects and learners' level *8.5, 8.8, 8.9*	C.6 Determine appropriate learning resources available for teaching and learning	C.7 Construct appropriate assessment measures *13.2*	C.8 Utilize results of learner assessment and teacher's reflection in developing lesson plans *13.5, 13.6, 15.2, 15.3*
D	**Creating a conducive learning environment**	D.1 Foster a safe, clean and orderly learning environment *10.1*	D.2 Promote a caring and learning-friendly environment *10.1*	D.3 Motivate active learning *8.6*	D.4 Foster an understanding to maintain a high standard of learning performance *10.1*	D.5 Respect diversity of learners *4.3, 8.6, 12.2, 12.3*	D.6 Maintain a collaborative learning environment *8.3, 10.1*		
E	**Developing and utilizing teaching and learning resources** *10.6*	E.1 Acquire knowledge and skills in the use of teaching and learning resources	E.2 Develop teaching and learning resources appropriate for the lesson	E.3 Utilize appropriate teaching and learning resources for the lesson	E.4 Integrate use of ICT in teaching and learning *8.10, 9.1, 9.2*	E.5 Monitor and evaluate the use of teaching and learning resources			
F	**Developing higher order thinking skills (HOTS)** *8.6*	F.1 Equip oneself with HOTS concepts and strategies	F.2 Develop HOTS in learners	F.2.1 Develop creativity	F.2.2 Develop critical thinking skills *8.6*	F.2.3 Develop logical reasoning skills	F.2.4 Develop problem solving & decision-making skills	F.3 Strengthen HOTS in learners	F.4 Assess HOTS of learners
G	**Enhancing ethical and moral values** *1.4, 2.1, 2.2, 2.3., 3.2*	G.1 Internalize teachers' professional code of ethics as specified in one's country	G.2 Uphold and model teachers' professional code of ethics	G.3 Educate learners and co-teachers with ethics and moral values					
H	Assessing and evaluating learner performance *13.1 – 13.6*	H.1 Acquire knowledge and skills on testing, assessment and evaluation (e.g. authentic & portfolio assessment)	H.2 Develop formative and summative assessment tools	H.3 Assess students learning using different and appropriate assessment tools	H.4 Utilize assessment results				

I	**Engaging in professional development**	I.1 Conduct development needs analysis *15.2*	I.2 Prepare one's professional development plan	I.3 Engage in professional development *15.*	I.4 Reflect on the relevance of professional development undertaken *15.2*	I.5 Apply, share and disseminate new knowledge and skills gained from professional development activities, study visits and exchange programs *14.3, 15.6, 15.7*	I.6 Mentor/ coach novice/ student teachers *15.4*	I.7 Assess the impact of professional development activities *15.2*	
J	**Networking with stakeholders especially with parents**	J.1 Enhance public relation skills *7.1*	J.2 Develop partnership with parents and other stakeholders *7.3, 12.4*	J.3 Share the responsibility of educating students with the community *7.3*	J.4 Participate actively in socio-civic events of the community				
K	**Managing students' welfare and other tasks**	K.1 Provide guidance and counseling support *12.4*	K.2 Develop counseling and disciplinary skills *7.1 – 7.7*	K.3 Organize and advocate social and extracurricular activities *16.6*	K.4 Attend to learners' emergency cases *6.3*	K.5 Perform administrative work *15.1*			

Numbers in *italic type* under each Specific Task / Competency refer to the relevant indicator of the newly developed 'Standards for Vocational Teachers in Lao PDR'.