Master Plan for Teacher Qualification Upgrade 2021-2025

Accelerating the upgrade of basic teacher qualifications to degree level

PREFACE

The Royal Government of Cambodia has implemented the National Development Strategy Plan to transform Cambodia to be an upper-middle income country by 2030 and developed country by 2050. In respond to the above triangle strategy, the Ministry of Education, Youth and Sport has paid attention on producing human resources to meet country needs as knowledge-based society. To better implement this task requires teachers to possess knowledge, skill, competence, technology and responsibility in accordance with Teacher Professional Standard.

To date, teachers are trained at Teacher Training Institutions in different modalities according to time and region to meet school demand, making teacher qualification level unequal and effect to education quality. Facing this challenge, the Ministry of Education, Youth and Sport in collaboration with development partners establish Master Plan on Teacher Qualification Upgrades 2021-2025 with the objective to promote teacher's qualification not only to obtain bachelor of education but also to increase living standard and quality of teacher.

The Master Plan on Teacher Qualification Upgrade was accumulated in equivalent with digital society, 21st century skills and the needs of education sector strategies of 4 priorities:

- Set education system and continuous professional development for teachers
- Set the needs for teacher qualification upgrade
- Manage continuous professional development for teachers
- Motivate, attract, and maintain teachers from all levels in the education system

The Ministry hopes that all teachers pay attention and implement four major strategies of the Master Plan on Teacher Qualification Upgrade 2021-2025 in each year efficiently.

On behalf of the Ministry of Education, Youth and Sport, I would like to express my deep gratitude to the working team, involved institutions, and all development partners which has collaborated, sacrificing mind, energy, and intelligent and resources in emerging this

valuable Master Plan. 🗸

Dr. HANG CHUON NARON

them Rent 25. January.

2022

Minister

Ministry of Education, Youth and Sport

Contents

Pretace	2
Abbreviations	iv
1.Policy Background	1
1.1.Teacher education in a changing world	1
1.1.1.Trends in teacher education policy	1
1.1.2.Key competencies required in the digital society	2
1.2.Teacher education in the regional context	2 3
1.3.Teacher qualification upgrade in the Cambodian context	4
1.3.1.Background	4
1.3.2.Education Strategic Plan 2019-2023	5
1.3.3.Teacher Policy Action Plan (TPAP)	5
1.3.4.Continuous Professional Development (CPD) and Teacher Career Pathways (TCP)	6
2.Strategies for teacher qualification upgrade	8
2.1. Priorities in teacher qualification upgrade	8
2.1.1Teacher supply and demand	8
2.1.2.The definition of "Qualified" teachers	9
2.2. Teacher Education Providers	11
2.2.1. Overview	11
2.2.2. Comparison of the PRESET Curriculum	13
2.2.3.Teacher Educators in TECs and TTCs	17
2.2.4. What programmes can offer for teacher qualification upgrade?	17
2.3. Approaches by school category	19
2.3.1. Lower secondary teachers	19
2.3.2. Primary teachers	19
2.3.3. Pre-primary teachers	20
2.3.4. Private school teachers	20
2.4. Strategies for teacher qualification upgrade	21
2.4.1. Basic Principle	21
2.4.2. Legal framework	21
2.4.3. Strategies for teacher qualification upgrade	23
2.4.4. Consideration of "how many by when"	28
2.5. Budget for implementation	29
2.6. Present and future challenges	30
2.6.1. Short-term challenges	31
2.6.2. Mid-and long-term challenges	34
References	30

List of Table

Table 1 Level of education of teaching staff in 2019-2020	4
Table 2 Unimplemented activities related to TQU in TPAP	6
Table 3 Number of CPD credits which may contribute to TQU	11
Table 4 Teacher education providers in Cambodia	11
Table 5 Credits allocation of TEC 12+4 Curriculum	14
Table 6 Comparison of the number of credits between PTTC and TEC (Primary)	15
Table 7 Distribution of teaching hours in the RTTC curriculum	16
Table 8 Comparison of the number of credits between RTTC and TEC (lower secondary)	16
Table 9 Programmes for teacher qualification upgrade	18
Table 10 The estimated number of teachers for qualification upgrade to BA	19
Table 11 Educational background of pre-primary teachers	20
Table 12 Educational background of private school teachers	21
Table 13 The minimum number of credits compulsory for primary teachers to upgrade the	
qualification	22
Table 14 The minimum number of credits for lower secondary teachers to upgrade the qualifica 22	tion
Table 15 Relevant degrees for lower secondary teachers to get a reduction of credits	23
Table 16 Experience-based reduction of the number of credits	23
Table 17 Main Actions for Strategy 1	24
Table 18 Main Actions for Strategy 2	25
Table 19 Existing upgrade programmes for primary and lower secondary teachers	25
Table 20 Main Actions for Strategy 3	26
Table 21 Educational qualifications of primary and secondary teachers	27
Table 22 Main Actions for Strategy 4	27
Table 23 Number of lower secondary teachers to upgrade by modalities	28
Table 24 Brief summary of CPD programmes for lower secondary teachers to updrade equal to	ВА
level	28
Table 25 Number of primary teachers to upgrade by modalities (by year up to 2023)	29
Table 26 Brief summary of CPD programmes for primary teachers to upgrade equal to BA level	29
Table 27 Budget estimation for TQU programmes (long/short-term CPD programes) for lower	
secondary teachers by year up to 2023	30
Table 28 Budget estimation for TQU programmes (long/short-term CPD programes) for primary	,
teachers by year up to 2023	30
Table 29 Action Plan for Teacher Qualification Upgrade (TQU) 2021-2025	35

List of Figures

Figure 1 Teacher Qualification Upgrade in ESP 2019-2023	5
Figure 2 Options to produce "Qualified" BA teachers	10
Figure 3 CPD credit attribution formula	32

Abbreviations

ACC Accreditation Committee of Cambodia
ASEAN Association of Southeast Asian Nations

BA Bachelor of Arts

CPD Continuing Professional Development

CPDMO Continuous Professional Development Management Office

CTD Committee for Teacher Development

DOE District Office of Education

DTMT District Training and Monitoring Team

ECE Early Childhood Education

EMIS Education Management Information System

ESP Education Strategic Plan

E-TEC The Project for Establishing Foundations for Teacher Education Colleges

FMIS Financial Management Information System

GDP Gross Domestic Product

GEIP General Education Improvement Project
GSED General Secondary Education Department

HEI Higher Education Institution

HEMIS Higher Education Management Information System

IBL Inquiry Based Learning

ICT Information and Communication Technology

INSET In-service Education and Training

JICA Japan International Cooperation Agency

LEADS Language Enhancement and Academic Discourse Skills

LS Lower Secondary
MA Master of Arts

M&E Monitoring and Evaluation

MoEYS Ministry of Education, Youth and Sport

MOOC Massive Open Online Course

NFE-MIS Non-Formal Education-Management Information System

NIE National Institute of Education

NIPES National Institute of Physical Education and Sport

NGO Non-Government Organization

NSDP National Strategic Development Plan

OECD Organization for Economic Co-operation and Development

PISA Programme for International Student Assessment

POE Provincial Office of Education

PGCE Postgraduate Certificate in Education
PRESET Pre-service Education and Training
PSTTC Preschool Teacher Training Centre
PTTC Provincial Teacher Training College
RGC Royal Government of Cambodia
RTTC Regional Teacher Training Centre
RUPP Royal University of Phnom Penh

SABER Systems Approach for Better Education Results

SACMEQ The Southern and Eastern Africa Consortium for Monitoring Educational Quality

SBM School-Based Management
SDG Sustainable Development Goal

SEIP Secondary Education Improvement Project

SNS Social Networking Services

STEM Science, Technology, Engineering and Mathematics

STEPCam Strengthening Teacher Education Programmes in Cambodia

SY School Year

TCP Teacher Career Pathways
TEC Teacher Education College
TEI Teacher Education Institution

TEPS Teacher Education Provider Standards

TPAP Teacher Policy Action Plan
TQU Teacher Qualification Upgrade

TTC Teacher Training Centre
TTD Teacher Training Division
TUP Teacher Upgrade Programme

UNICEF United Nations Children's Fund WASH Water, Sanitation and Hygiene UNESCO United Nations Educational, Scientific and Cultural Organization

US Upper Secondary

USESDP-2 Second Upper Secondary Education Sector Development Program

1.Policy Background

1.1. Teacher education in a changing world

1.1.1. Trends in teacher education policy

The last few decades have seen an increasing shift away from concern with access to a concern with quality, within the education systems of developing countries. In the context of this shift to quality improvement, teacher effectiveness has risen to the top of the education policy agenda, with many nations convinced that teaching is one of the most important school-related factors in student achievement (OECD, 2011; Darling-Hammond, 2017).

Teacher education policy covers a wide range of activities and dimensions, from initial teacher education, a probationary period during which new teachers benefit from induction, continuous professional development, staff resource management, teacher appraisal and career progression, and salary and incentives (World Bank, 2011; UNESCO 2013). Governments around the world have introduced different initiatives with varying degrees of success, and it is not easy to compare the progress of these overall, given the extent of variation between the different systems.

Within the complex attempts to reform teacher education, however, it is possible to identify some common trends. In recent decades, one of the major reforms aimed at improving the quality of teacher education has involved qualification upgrading. During the 1970s, many high-performing countries introduced education reforms to upgrade teachers' qualifications from upper secondary level to Bachelor's degree level and, since the 1980s, in some cases, from Bachelor's degree level to Master's degree level, with the aim of producing more professional and better qualified teachers. These countries, which include the USA, European countries, Singapore, Japan, and Korea, also engaged in setting professional standards for teachers and many have now developed their own national standards; almost half of OECD countries have set teacher professional standards and introduced teacher licensing systems (OECD, 2015).

Many developing countries are also engaged in upgrading teacher qualifications, often to diploma level for primary teachers and to degree level for lower secondary teachers, although the minimum requirements for teachers are still secondary or post-secondary and non-tertiary education level, in many countries, particularly in Sub-Sahara Africa. System's Approach for Better Education Results (SABER) led by the World Bank, sets one of the teacher policy indicators to measure the quality of education as minimum standards for pre-service teacher education programs for primary and lower secondary education. Although the major international organizations engaged in teacher education have asserted that the minimum requirement for teachers should be a bachelor's degree (World Bank, 2013), there are still big gaps between these policy target and the reality in many countries.

Needless to say, what it at stake is not only the length of the teacher education program but considerations such as the contents of the course of study, the methodology employed, the good balance of lectures and practicum, the quality of teacher educators, the academic level of student teachers etc. The SACMEQ survey reveals that duration of teacher education alone is not a direct predictor of students' learning performance (World Bank, 2007).

Furthermore, the decision of candidates to apply to enter teacher education takes place within the wider context of the higher education system and the labour market. Any ambition to attract candidates of sufficient quantity and quality into teacher education must take account of this context. Countries which have succeeded in attracting and retaining sufficient candidates of the right quality to improve their educational outcomes have done so by ensuring teaching is recognized as a profession to which the best candidates aspire, comparable to professions such as medicine, engineering and law. Salary is a key factor in attracting and retaining the right individuals to the teaching profession:

Within a labour market perspective, education systems which pay attractive salaries relative to comparable professions will be more successful in attracting and retaining good quality teachers.../... Where teacher salaries do not reflect the level of education, training and responsibilities required, or allow teachers to live decently without taking on second jobs, the teaching profession loses prestige, adversely impacting on recruitment, motivation and retention (UNESCO, 2015:24).

Other factors which contribute to candidates of quality opting for teacher education include the potential within the teaching profession for career progression and access to professional development; employment and working conditions; deployment policies; a shared sense of professional identity and agreement about what makes a good teacher; a culture of accountability and transparency and questions of leadership and governance within schools (UNESCO, 2015). The mid-term plan for teacher qualification upgrade, in seeking to promote the upgrading of teacher qualifications to degree level, is situated within this wider context. An agenda to support teachers to upgrade their qualifications must take account of the wider labour market and societal context if teachers who upgrade their qualifications are to remain in the profession and realize their potential as educators, leading to better educational outcomes for their students. As such, teacher qualifications upgrading is one strategy within a holistic teacher policy reform, as reflected in the wider Teacher Policy Action Plan (TPAP, see section 1.3.3 below).

1.1.2. Key competencies required in the digital society

A key factor in teacher policy is determining the competencies teachers should develop. The competencies required of teachers should be discussed along with educational objectives for children and the competencies that children should develop in schools (OECD, 2005; UNESCO, 2011; World Bank, 2013). Defining key competencies for teachers is particularly important in the present era of rapidly developing information technology and economic development. These key competencies vary according to countries' priorities, but some common trends emerge globally, including the focus on children achieving the twenty-first-century skills, generally defined as aggregates of creativity, critical thinking, innovation skills, digital literacy skills, communication, collaboration, career and life skills, etc (OECD, 2009). The assumption is that to support their students to survive and thrive in the digital era, teachers must be able to support learning communities that enable students to collaborate, share best practices, and integrate the twentyfirst-century skills into classroom practice. This in turn will enable students to learn in relevant, real world contexts (that is through project-based or applied work). Effective instruction in the twentyfirst-century skills needs to take an integrated approach, helping students understand how to access, evaluate, synthesize, and contribute to information. It is necessary to provide opportunities for students to apply these skills across content areas and within a competency-based approach to learning. The OECD learning framework 2030, issued in 2018, goes further and aims to include and go beyond the twenty-first-century skills to achieve sustainable development (OECD, 2018).

In Cambodia, the Ministry of Education, Youth and Sport (MoEYS) has announced the strong need to introduce and strengthen the twenty-first-century skills within education, to produce high-skilled human resources to integrate economically in the ASEAN region and create new economic sectors such as electronics, agro-industry, logistics in the digital age, and to meet the national target of reaching upper middle-income country status by 2030. The MoEYS emphasises the importance of digital education with the purpose of using technology to solve economic and social problems in the context of the 4.0 Industrial Revolution and the creation of the smart city. Specifically, MoEYS supports the concept-based curriculum, to allow students to obtain relevant knowledge, skills and behaviour, through a proactive inquiry-based learning teaching approach (IBL), including implementation of such curriculum, conducting inspections and study assessment in the classroom and graduation examinations (Naron, 2019).

Furthermore, the COVID-19 pandemic, which has affected educational systems worldwide and led to the near-total closures of education institutions, has accelerated the development of distance and e-learning materials so as not to stop the learning of students in primary and secondary schools, universities, and Teacher Education Institutions (TEIs). The MoEYS has announced the policy to promote distance and e-learning throughout the country in April 2020, and taken a comprehensive approach that involves conducting real-time online classes, broadcasting video lessons through YouTube, SNS, TV and radio, and conducting face-to-face small classes in rural villages where people have limited resources and opportunities for such alternatives. TEIs, such as NIE, TECs and TTCs, have been preparing video lessons and sharing those with students taking the corresponding module through SNS, so that the lecturer and his/her students can easily and frequently communicate. Under these circumstances, teacher educators are obliged to learn the ways of making effective use of digital devices, preparing the contents for e-learning, and communicating with students through SNS, through which teachers and teacher educators have rapidly adapted to digital education.

1.2. Teacher education in the regional context

The duration of initial teacher education is increasing with such world-wide trends behind. Among 10 ASEAN countries, all the old 6 member countries offer preservice primary teacher training programmes at a bachelor or higher level (e.g., UNESCO, 2014; World Bank, 2015; OECD/UNESCO, 2016). More recent and less wealthy ASEAN member countries, such as Cambodia, Laos, Myanmar and Vietnam, also have launched 4-year PRESET for primary teachers (e.g., JICA, 2015; Nomura, J. et al, 2019; Nguyen, 2008), in which Myanmar has started 11+4 PRESET programme at the end of 2019 and is planning to move to 12+4 by the end of 2023. Most of these countries also offer other models of preservice primary teacher training along with 4-year PRESET, such as 9+3 and 12+2, and Brunei Darussalam sets a master's degree as the minimum requirement for teaching profession (Jawawi, R. et al., 2014), which is the highest requirement in ASEAN. Given that the qualifications required for lower and upper secondary teachers are equivalent or higher than those for primary teachers, all the ASEAN countries have 4-year PRESET to be teachers of basic education.

However, the situation varies by country, and some countries show a wavering attitude toward the minimum qualification requirement for teachers. For example, in Thailand, the duration of a teacher preparation programme was increased from 4 to 5 years in 2002 for the purpose of improving the quality of teacher education. As a result, Thailand has become a country that has a higher share of primary teachers with a bachelor's degree and secondary teachers with a master's degree compared to the other Asian countries (Ingersoll, 2007). However, the duration of PRESET was recently reviewed in Thailand and the Teachers Council of Thailand agreed on swinging back to the 4-year program in 2017. It is now believed that a good quality program can produce qualified graduates with 4 years if the country would be succeeded in attracting student teachers with higher level of academic qualification at the entrance stage (Nomura et al., 2019).

In Indonesia, Law on Teachers and Lecturers (2005) required all teachers to have a qualification of a bachelor's degree or 4-year diploma, which contributed to increasing the number of primary teachers with bachelor's degrees from 17% in 2006 to 55% in 2012 (World Bank, 2015). In addition, the government of Indonesia introduced a teacher certification programme in 2007 for those teachers with a minimum bachelor's degree and a permanent employee status, which aimed at increasing the quality of teachers. The teachers who successfully completed the certification programme received a professional allowance that was equal to their base salary. However, a research study by World Bank has shown that teachers with bachelor's degrees are only moderately better teachers than teachers without bachelor's degrees, which is especially true for primary school teachers; and teachers with a reasonable level of subject-matter knowledge are much better teachers than teachers who have difficulties with even the most basic mathematical exercises (World Bank, 2015).

1.3. Teacher qualification upgrade in the Cambodian context

1.3.1.Background

This section sets out the policy context in Cambodia and presents the different policy instruments which concern Teacher Qualification Upgrade (TQU). As part of the professionalization of the teaching force, necessary to improve the quality of teaching and learning overall, teaching needs to attract the best candidates into the profession. Teacher qualification upgrade (TQU) is an important part of that endeavour. In the context of Cambodia, there are two dimensions to "teacher qualification upgrade" (TQU): (i) upgrading the existing initial teacher education (or PRESET) system from "12+2" to "12+4", and (ii) upgrading the educational qualifications of teachers currently in service who hold a 12+2 certificate to a bachelor level through in-service training programmes.

The vast majority of Cambodian teachers up to the lower secondary level do not currently have a bachelor's degree in teaching. Although 542 preschool teachers and 6,490 primary teachers have a bachelor's, master's, or doctorate degree in the academic year 2019-20 as in Table 1 below, the disciplines they have studied are unlikely to be related with "teaching" because bachelor's degrees specialised in teaching profession are not offered in any Higher Education Institutes (HEIs) in Cambodia. Table 1 also shows that there are 18,420 BA holders in secondary schools, but this includes both (i) lower secondary teachers completing 12+2 at TTCs and then receiving BA from domestic private universities, and (ii) upper secondary teachers completing BA+1 at NIE. Thus, it is not clear how many lower secondary teachers have BA or higher degrees although their degrees are unlikely to be specialised in teaching and learning.

Table 1 Level of education of teaching staff in 2019-2020

Education level	Primary	L.Sec.	U.Sec.	Bachelors	Masters	Doctorate	Total
Pre-school	238	1.569	3.068	530	11	1	5.417
Primary	1.428	10.062	26.904	6.256	230	4	44.884
Secondary	816	5.711	16.465	18.420	1.302	18	42.732
Total	2.482	17.342	46.437	25.206	1.543	23	93.033

Source: MoEYS (2020) Education Statistics and Indicators 2019-2020, p24

On the other hand, there are only a few institutions that can provide teacher education at the bachelor level or higher: NIE offers BA+1 PRESET for upper secondary teachers; Phnom Penh and Battambang TECs offer 12+4 PRESET for primary and lower secondary teachers and INSET for PTTC trainers to upgrade their qualification from 12+2 to BEd through STEPCam project supported by UNESCO; and RUPP conducts "Teacher Upgrade Programme" (TUP) as part of Secondary Education Improvement Project (SEIP) funded by the World Bank to upgrade the educational qualification of around 2,000 lower secondary teachers from 12+2 to BA.

Given that there are 44,914 primary and 27,738 lower secondary teachers in the academic year 2019-20 (MoEYS, 2020)¹, the above TUP contributes to upgrading the qualification of around 7% lower secondary teachers, although 2 TECs are supposed to produce 300 primary and 200 lower secondary teachers through 12+4 PRESET, which account for only 0.6% and 0.7% of teachers of those schools, respectively. As 12+4 PRESET in TECs is a sole permanent mechanism that can increase the number of teachers with BA in teaching, it is urgently needed to create alternative mechanisms that help accelerate the teacher qualification upgrade process so that Cambodia will not fall behind other ASEAN countries in teacher development.

¹ The figures were cited from the EMIS 2019-2020 "Table 1. Schools, Classes, Students and Staff" (page 1).

1.3.2. Education Strategic Plan 2019-2023

The policies, strategies, and targets related to TQU in the current Education Strategic Plan (ESP) 2019-2023 are summarized in Figure 1. It suggests several modalities for accelerating TQU, such as: implementing long- and short-term CPD programmes, piloting BA+1 PRESET, and increasing the number of TECs by transforming TTCs.

The ESP 2019-2023 also sets some numerical targets for TQU as shown in Figure 1. Achieving these targets will require immediate action to prepare an implementation plan and allocate sufficient budget to implement several programmes through the above mentioned modalities. It should be borne in mind that there were approximately 45,000 and 28,000 primary and lower secondary teachers (MoEYS, 2020), respectively, in 2019-20, so in order to meet the targets of 7% primary and 15% lower secondary teachers with BAs, more than 3,200 and 2,300 new BA teachers would need to be trained at the primary and lower secondary levels, respectively, by the year 2023.

#	Indicator	Baseline 2018	Target 2023
21	Percentage of primary teachers who complete BA through teacher education courses	0.0 %	7.0 %
ondar	y Education Sub-sector (Page 35)		
#	Indicator	Baseline 2018	Target 2023
23	Percentage of lower secondary teachers who complete BA through teacher education courses	6.7 %	15.0 %
gy 2.2: evelop	Education Sub-sector Strengthen the quality of in-service training for primary teachers and implement both long and short continuous professional devent teacher qualification upgrades. (Page 30) ***********************************	lopment (CPD)) programn
gy 2.2: evelor imed a	Strengthen the quality of in-service training for primary teachers and implement both long and short continuous professional deve	lopment (CPD	programn
gy 2.2: evelor imed a	Strengthen the quality of in-service training for primary teachers and implement both long and short continuous professional devent teacher qualification upgrades. (Page 30) ***********************************	lopment (CPD) programn
gy 2.2: Developimed a Beacher Transfo	Strengthen the quality of in-service training for primary teachers of and implement both long and short continuous professional development teacher qualification upgrades. (Page 30) ***********************************	***************************************	
gy 2.2: Developimed a Deacher Transfor Developer	Strengthen the quality of in-service training for primary teachers of and implement both long and short continuous professional development qualification upgrades. (Page 30) ***********************************	***************************************	
gy 2.2: develop imed a eacher ransfo develop eferen	Strengthen the quality of in-service training for primary teachers of and implement both long and short continuous professional development teacher qualification upgrades. (Page 30) ***********************************	***************************************	
gy 2.2: levelop imed a eacher ransfo levelop eferen	Strengthen the quality of in-service training for primary teachers of and implement both long and short continuous professional development teacher qualification upgrades. (Page 30) ***********************************	Cs by revising	the terms

Figure 1 Teacher Qualification Upgrade in ESP 2019-2023

1.3.3. Teacher Policy Action Plan (TPAP)

The Teacher Policy Action Plan (TPAP) was developed in 2015 under ESP 2014-18, and is still a cornerstone for teacher development. While a number of strategies under TPAP, such as launching TECs in Phnom Penh and Battambang for 12+4 PRESET, have been successfully implemented, the TPAP Review & Analysis (2019) pointed out that many more were left undone, mainly because of a lack of financial and human resources. In relation to TQU at the primary and lower secondary levels, the TPAP activities listed in Table 2 are yet to be implemented.

As seen in the table, TPAP planned to introduce a BA+1 PRESET model on a pilot basis through HEIs and TECs, and INSET programmes to upgrade the qualification of teachers to BA level or higher, although BA+1 was yet to be seriously discussed in MoEYS. It also sets a target of

recruiting 1,000 MA holders as teacher trainers, mainly by attracting upper secondary teachers with master's degrees into teacher education. However, given that TECs suffer from a shortage of qualified lecturers (i.e., those having MA degrees, sufficient teaching experience, ICT and English skills, etc.), it is highly unlikely that a sufficient number of MA holders will be willing to work for PTTCs and RTTCs. There is a need for more fundamental reforms to incentivize competent individuals to work in teacher education.

Table 2 Unimplemented activities related to TQU in TPAP

	Onlin plemented activities related to 120 in 11Ai	
	Strategies & Activities	Indicators
Strateg	y 2: Attracting competent persons into teaching profession	
2.3.1.1	Diversify entry points into the teaching profession by allowing the BA holders from both public and private HEIs to receive teaching license	Number of BA holders receiving teaching license
2.4.3.1	Introduce BA+1 PRESET stream for public teachers in RTTCs with technical support from TEPS certified HEIs following the principle set by the RGC	 Pilot BA+1 PRESET Plan developed Number of TTCs offering BA+1 PRESET (PP and BB)
2.4.3.2	Introduce BA+1 PRESET stream for private teachers in TEPS certified HEIs (leading to certification, but no guarantee of MoEYS employment)	Number of HEIs certified by TEPS to run BA+1 PRESET
Strateg	y 3: Defining the Standards of Teacher Training Systems	
3.1.2.2	Create BA+1 PRESET curriculum for BA holders to become Basic Education teachers in RTTCs focusing on Psycho-pedagogy, ICT, methodology, foreign languages, Math and Science	Curriculum Completed
3.1.3.2	Pilot BA+1 PRESET at two RTTCs with technical support from HEIs	Develop Pilot PlanPilot commences in PP and BB
Strateg	y 4: Developing Teacher Education Centres	
4.3.1.2	Recruit new full-time Teacher Trainers from pool of MA/PhD holders or those who possess extensive teaching experience (content knowledge, professional, working seniority, ICT, foreign language, and professional code of conduct)	 Recruit 1,000 new trainers who hold MA Recruit 30 new trainers who hold PhD
Strateg	y 6: Provision of in-service training and professional developmen	t for teachers
6.1.1.4	Establish new INSET structure within TECs (in policy called Center for Teacher Development)	• Pilot INSET Structure in PP & BB RTTCs and PTTCs
6.1.1.6	Carry out teacher INSET using (i) Phasing models: three phases with 1.5 month per phase, (ii) Long-term model: lasting from 2 to 3 years, (iii) Credit earning model: through on-site training or distance learning with proper management and assessment for the teachers to receive the certificate/degrees equivalent to upper secondary school, BA or MA	 Number of INSET courses by types Number of teachers attended the INSET courses

1.3.4.Continuous Professional Development (CPD) and Teacher Career Pathways (TCP)

The Continuous Professional Development Framework and Action Plan (CPDFAP) 2019-2023 was approved in September 2019. This encourages teachers and school directors to develop their knowledge and skills through a "hybrid" academic and non-academic CPD system, which awards credits for a wide range of CPD activities, including both higher education courses, such as degree programmes, academic qualification upgrading, Teacher Education certificates and post-graduate

diplomas, and professional development activities, such as self-study, participation in Professional Learning Communities (PLCs), school-based and cluster-based CPD. CPDFAP defines CPD for Cambodia as "a wide variety of specialized training, formal and informal education, or advanced professional learning intended to help classroom and specialist teachers and school directors improve their professional knowledge, skills, competence and effectiveness" (8). In Cambodia, the CPD system considers two categories of CPD:

- **Structured CPD**, which refers to formal courses or other CPD activities delivered by an accredited CPD provider, for example a TEI, a development partner or a technical department of the MoEYS;
- **Self-directed CPD**, which refers to CPD undertaken by the educator without the formal support of an accredited provider but within the scope of the CPD framework².

CPD credits may be earned for both types of CPD³. The CPD system is being introduced in Cambodia as a phased process, beginning with structured CPD.

1.3.4.1. Structured CPD

Structured CPD consists of a CPD activity delivered by an accredited CPD provider, which will include a specified amount of face-to-face activities. Face-to-face activities may take the form of workshops, taught courses, seminars, action research group activities, or other activities. For every hour of face-to-face activity, participants are expected to engage in at least two hours of self-study. Because CPD is an active process, where the teacher is at the centre of their own development, even structured CPD involves a significant amount of self- study and requires the teacher or school directors to demonstrate that they have actively engaged in the CPD process, by producing evidence that they have applied the learning to their professional practice in the classroom and in school, reflecting on the relationship between theory and practice and how the learning may help them improve their teaching.

1.3.4.2. Self-directed CPD

Self-directed CPD is based on input sourced by the individual teacher, without recourse to an accredited CPD provider. This input includes (but is not limited to) a massive open online course (MOOC), attendance and/or presenting an original work at a conference or other professional learning activity, participation in a research group, reading professional literature in the form of journals or books, for example, researching and publishing an article, etc. A list of accredited sources recognized by Continuous Professional Development Management Office (CPDMO) will be published in due course, once the system to award CPD credits for self-directed CPD is operational. It will also be possible for credits to be earned for self-directed CPD from a source not yet accredited; teachers, school directors, and education specialists will need to make an individual request for accreditation of the source(s) used.

For every hour of self-directed engagement with a CPD source, participants are expected to engage in at least two hours of related self-study. The teacher or school director must demonstrate that they have actively engaged in the CPD process, by producing evidence that they have applied the learning to their professional practice in the classroom and in school, reflecting on the relationship between theory and practice and how the learning may help them improve their teaching.

The Teacher Career Pathways (TCP) Framework was developed in 2018 and is being revised to provide teachers with a roadmap for career advancement, through progression along three distinct

² The CPD system is being introduced using a phased approach, starting with formal CPD in 2020. Self-directed CPD will be introduced in 2025.

³ The CPDFAP refers to a "hybrid" academic and non-academic CPD credit system (17), where academic CPD is delivered by TEIs or HE institutions and leads to course credits (within a TQU perspective) and non-academic CPD may school-based, cluster-based, or delivered by a TEI or by MoEYS.

but interconnected pathways: the "Teaching Track", "Leadership Track" or "Education Specialist Track". Progression along the pathways is determined by five appraisal criteria: Qualification Level, Experience, Achievements, Professional Outcomes and Professional Competence. CPD contributes directly to qualifications and professional competence, and indirectly to achievements. As teachers who meet the relevant criteria progress along the pathways, they may progress from "Teacher" to "Senior teacher". Some teachers will go on to become "Lead Teacher" and even "Master Teacher". The TCP is closely aligned with the CPDFAP, so that engaged, successful participation in CPD drives career progression. Progression within each stage of the TCP, associated with incremental functional allowance progression, is triggered by annual appraisal outcomes, based, among other factors, on successful completion of individual annual professional development plans; progression between the TCP levels is determined by a high-stakes TCP appraisal by TCP committees, and leads to new professional titles and corresponding functional allowance progression.

According to the CPD framework, accredited Teacher Education Institutions (TEIs), HEIs, and MoEYS Technical Departments (TD) will be providers of some CPD for teachers and directors (see the CPD Handbook for other CPD providers and accreditation criteria). As stated above, within the TCP, academic qualifications constitute one of the factors which count towards career advancement. As teachers benefit from CPD programmes which meet credit acquisition criteria to contribute to their educational qualification upgrade to the BA level (TQU), this will therefore help them move along the career path. Therefore, INSET/CPD programmes for TQU should be conducted in close alignment with the CPD credit system, so that the changes in teachers' academic qualifications are recorded in the HRMIS. The HRMIS shall be administered by the CPDMO, and will include teacher-level information about CPD undertaken and credits awarded, ensuring these contribute towards teacher career advancement through the TCP.

There is a need for both great flexibility and a high degree of alignment between the different elements of the teacher education system. Within the CPD credit system, all CPD offerings meeting the credit attribution criteria, will be assigned a number of credits. Given the ambitious targets for TQU, as well as the need to incentivise CPD as part of the drive to improve education quality, it is important that the credits for all CPD undertaken by teachers contribute to their academic qualification upgrade and career progression within the agreed parameters. It is entirely feasible that individual courses/modules of the in-service programmes designed to achieve TQU to Bachelor level could be offered to teachers not currently enrolled in those programmes, as part of their CPD activities. Conversely, credits obtained for engaging in CPD activities which are not part of formal TQU programmes can contribute towards these, providing the content of the CPD activities is accredited and judged to correspond to the BEd requirements, as stipulated in Prakas 1870. For a detailed proposal of how this might function (see Table 3).

2. Strategies for teacher qualification upgrade

2.1. Priorities in teacher qualification upgrade

2.1.1Teacher supply and demand

The "Teacher Education Subsector Analysis Report" (E-TEC 2019) provides a detailed analysis of teacher supply and demand in public (not private) schools up to the year 2030. The analysis is based on the following assumptions. It should be noted that Assumptions (i) to (iv) above are policy targets and that Assumption (v) is attributable to the limitations that MoEYS faces in data collection at the school, district, and provincial levels.

- 1. In primary, 100% Net Enrolment Rate will be achieved gradually by 2030.
- 2. In lower secondary, 100% Gross Enrolment Rate will be achieved by 2030.
- 3. The 2014 staffing norms for primary and lower secondary schools will be achieved by 2030.
- 4. Double-shift schools will be gradually abolished by 2030.

5. In lower secondary, the analysis does not take account of variations between provinces and between subjects.

According to the above report, while the required number of primary teachers in the next 10 years is approximately 2,000 per year, that of lower secondary teachers is 3,500 per year due to Assumption (ii) that assumes an unprecedented, extremely rapid expansion of lower secondary education. On the other hand, if we assume that the increase of the number of lower secondary students will follow the past trend, the required number of lower secondary teachers will fall substantially to 450-500 per year in the next decade.

The report also points out a significant surplus and shortage of lower secondary teachers by province and subject based on the statistical data of year 2014-15 obtained from Department of Personnel: more than 1,000 teacher surplus is estimated in Phnom Penh; around 300 teachers need to be added in Takeo; Khmer language teachers are apparently oversupplied; and the teachers of physical education and IT education are critically undersupplied.

However, on the other hand, the COVID-19 outbreak definitely gives downward pressure on the number of students and so the required number of teachers. In fact, MoEYS has decided not to take new students for TEIs in the academic year 2020-2021. Also, World Bank (2020) points out that the economic impact on vulnerable rural communities in combination with long school closure and associated learning loss are likely to increase the students' drop-out rate. These indicate that the past estimation will not work in the future until the end of pandemic, and that we need to grope the way forward using the most up-to-date statistical information.

2.1.2. The definition of "Qualified" teachers

The term "qualified teachers" is currently used to indicate those preschool, primary and lower secondary teachers who have completed the 12+2 programmes in PSTTC, PTTC and RTTC, respectively, or those upper secondary teachers who have competed BA+1 in NIE. However, a clear definition for "qualified BA teachers" up to the lower secondary level was absent until MoEYS approved Prakas No.1870 on the qualification upgrade of teachers in November 2019. Prakas No.1870 stipulates the number of credits and the fields of study necessary to be accredited as BA teachers and to upgrade the qualification of preschool, primary and lower secondary teachers from 12+2 to BA, and makes a clear-cut distinction between "the teachers having BA specialized in the teaching profession" and "the teachers having BA in the disciplines irrelevant to teaching and learning" (e.g., BA in management, economics, accounting and so forth).

On the other hand, there can be various options to produce qualified BA teachers as shown in Figure 2. In the PRESET part of the figure, the concurrent model includes disciplinary studies and pedagogical studies in an integrated manner throughout a bachelor's programme, and the consecutive model focuses mostly on pedagogy following the disciplinary studies completed in a university. While the concurrent model is common for primary and secondary teachers, the consecutive model is more common for secondary teachers.

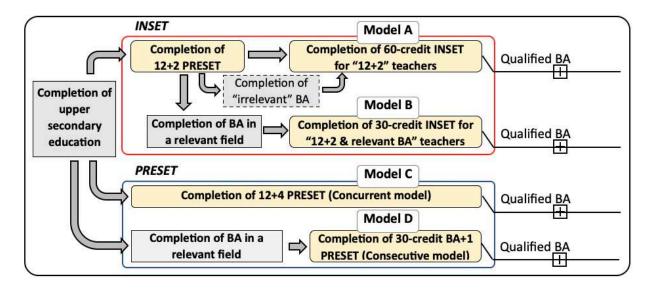


Figure 2 Options to produce "Qualified" BA teachers

In figure 2,

- **Model A** involves Teacher Upgrade Programme (TUP) conducted in RUPP for approximately 2,000 lower secondary teachers,
- **Model B** has not been conducted so far, but has a potential advantage in producing qualified BA teachers in 1 year max,
- Model C indicates the 12+4 programme in TECs, producing 300 primary and 200 lower secondary teachers in each of 2022 and 2023, and
- **Model D**, which is mainly for secondary teachers, has not been implemented for primary and lower secondary teachers, but conducted in NIE for upper secondary teachers.

The above Prakas No.1870 stipulates the number of credits and the fields of study for Models A to C, but not for Model D. Therefore, another Prakas will be necessary to ensure the equivalence between BA+1 and other models in terms of the level and contents of learning. For example, although Model A and Model D are similar in duration, Model D should focus more on pedagogy, teaching methodology, and practicum because the student teachers have already studied subject matters in a university, while Model A can reduce the credits for practicum as the participants are experienced teachers.

Given the possibility of having CPD credits contributing to TQU, it is necessary to determine to what extent CPD credits may be transferred by subject area in a TQU programme, as displayed in Table 3.

Table 3 Number of CPD credits which may contribute to TQU

	Areas of study	Pre- primary teacher (regular)	Pre- primary teacher with a BA or a higher degree in a relevant subject (TQU)	Pre- primary teacher with an associate degree in teaching or BA not in early childhood education (TQU)	Primary teacher (regular)	Primary teacher with a BA in a relevant subject (TQU)	Primary teacher with an associate degree in teaching or BA not in primary education (TQU)	Lower Secondary (LS) teacher (regular)	LS teacher with a BA in a relevant subject (TQU)	LS teacher with an associate degree in teaching or BA in an irrelevant subject (TQU)
		Model C	Model B (Short Tem CPD)	Model A	Model C	Model B	Model A	Model C	Model B	Model A
1	Education studies	12	4 (2)	6 (3)	12	4 (2)	6 (3)	15	4 (2)	6 (3)
2	Specialised academic subject	25	9 (4)	6 (3)	25	9 (4)	14 (5)	55	9 (4)	22 (8)
3	Curriculum studies	54	0 (0)	24 (12)	54	0 (0)	21 (7)	12	0 (0)	9 (4)
4	Language enhancement and academic discourse skills	2	0 (0)	2 (2)	2	0 (0)	2 (2)	8	0 (0)	6 (6)
5	Education research	3	3 (1)	3 (1)	3	3 (1)	3 (1)	3	3 (1)	3 (1)
6	Practicum	20	0 (0)	0 (0)	20	0 (0)	0 (0)	20	0 (0)	0 (0)
7	Common (essential) subjects	4	2 (1)	4 (2)	4	2 (2)	4 (2)	7	2 (1)	4 (2)
	Elective subjects determined by TEI**	0	12 (12)	15 (15)	0	12 (12)	10 (10)	0	12 (12)	10 (10)
	Total	120	30 (15)	60 (30)	Min 120	30 (15)	60 (30)	Min 120	30 (15)	60 (30)
					TEC 134			TEC 136		RUPP 63 Cr

^{**} Elective subject will be tailored by TEIs base on their Ss' needs (e.g. income generation at RUPP, Project-based activity, etc.)

The numbers in brackets refer to the number of CPD credits earned by successfully completing accredited professional development (PD) activities which can contribute to TQU within a given area of study. There is also an overall ceiling of total CPD credits transfer for each model (in red, in brackets), which is proposed to be 50% tentatively. The ceiling needs to be discussed at a later stage. CPD activities which can generate CPD credits for TQU include those offered at a school and cluster level by TEIs and HEIs (TECs, TTCs, RUPP, etc.) as well as self-directed ones such as attending a MOOC course. Both the CPD activities and providers need to be accredited by CPDMO of the MoEYS, and transfer of CPD credits for TQU is subject to verification and approval by the TEIs and HEIs implementing TQU programmes in conformity to the ACC (2004)'s credit system and credit transfer. Accreditation of a given CPD activity by the CPDMO would include the specification that credits thereby earned could contribute to validation of a given area of study. For example, once a CPD activity entitled "Strategies for managing large or diverse classes" was accredited, this would include the authorisation for CPD credits earned through its successful completion to contribute to the Education studies area of study for teachers engaged in qualification upgrading.

2.2. Teacher Education Providers

2.2.1. Overview

There are a number of teacher education providers in Cambodia as shown in Table 4.

Table 4 Teacher education providers in Cambodia

Name of Institutes	Target of PRESET	Target of INSET for qualification upgrade
Pre-School Teacher Training Centre (PSTTC)	Preschool teachers	_
Provincial Teacher Training Colleges (PTTC)	Primary teachers	_
Regional Teacher Training Centers (RTTC)	Lower secondary teachers	Basic teacher training for primary teachers*
Teacher Education Colleges (TEC)	Primary teachers / Lower secondary teachers	Basic teacher training for primary teachers* BA programme for PTTC trainers
National Institute of Education (NIE)	Upper secondary teachers	BA Fast-Track Programme for lower secondary teachers** Master of Education in Mentoring
Royal University of Phnom Penh (RUPP)	_	Teacher Upgrade Programme (to BA) for lower secondary teachers***

^{***} Student is required to earn at least 120 credit for BA

^{****} The selection of Model of implementing TQU will be discussed among TEIs at the implementation stage

These teacher education providers conduct either PRESET programmes at various levels or INSET programmes for teacher qualification upgrade or both.

2.2.1.2. TTC (PSTTC, PTTC, RTTC)

There are 1 Pre-School Teacher Training Centre (PSTTC) in Phnom Penh, 16 Provincial Teacher Training Colleges (PTTC)⁴ and 4 Regional Teacher Training Centres (RTTC)⁵ to produce preschool, primary and lower secondary teachers, respectively, through 12+2 PRESET at the associate degree level. The application requirement for TTC entrance exams is the completion of upper secondary education, but a vast majority of TTC students are likely to be ranked in D or E, just above F of "Fail", in the Grade 12 national exam⁶. The 12+2 PRESET was started in 1998, after the transition from 7+1 in the 1980s to 8+2 and 11+2 in the 1990s. In addition, 9+2 PRESET had been conducted in PTTCs till 2015 to meet the demand of primary teachers in remote areas. The graduates of PTTCs and PSTTCs are ranked as the cadre C in the salary scale of public servants, while those of RTTCs are the cadre B.

The educational qualifications of TTC trainers vary. While most of them have a bachelor's degree and recently hired trainers have BA+1 from NIE, some PTTC trainers do not have even a bachelor's degree. Some trainers have a master's degree, but the specialisms are not necessarily related with the subject they teach in TTCs.

Among these, RTTCs have been conducting Basic Teacher Training to upgrade primary teachers to lower secondary teachers through 2 times of 1.5-month training. This programme upgrades teachers' status by changing their salary scale from the cadre C to B.

2.2.1.3. TEC

In response to the TPAP and ESP 2014-2018, MoEYS established 2 TECs in Phnom Penh and Battambang to provide 12+4 PRESET, by merging PTTC and RTTC of each area. The TECs, launched in November 2018, offer a degree programme of Bachelor of Arts (Education) and are expected to produce primary and lower secondary teachers equipped with advanced subject and pedagogical knowledge. Based on Teacher Education Provider Standards (TEPS), TECs make efforts to keep the proportion of teaching staff having MA in the subject they teach not less than 50%.

Up to the school year 2019/20, TECs have been conducting both 12+2 and 12+4 programmes to meet immediate teacher demands from the provinces that each TEC covers. While TPAP envisages upgrading the minimum teacher qualification from 12+2 to 12+4 by 2020, this transition is still underway without specifying a completion date until which TECs will continuously conduct both programmes on orders from MoEYS.

With support from the STEPCam programme, TECs started a BA programme in the interval between school years for those PTTC trainers who do not have a bachelor's degree. This programme helps PTTCs raise the level of teacher education by enhance the competence of, and closing the gap between, teaching staff. This interval period is also used to conduct Basic Teacher Training as in RTTCs.

^{*} INSET for primary teachers to upgrade their status to lower secondary teachers, changing their salary rank from C to B (the rank of lower secondary teachers), but not changing an educational qualification

^{**} INSET for those lower secondary teachers who have been teaching in the upper secondary level, changing their salary scale from B to A (the rank of upper secondary teachers)

^{***} INSET for the teachers in the lower secondary schools that the world bank project covers, without changing the salary scale

⁴ PTTCs are located in Banteay Meanchey, Kampong Cham, Kampong Chhang, Kampong Speu, Kampong Thom, Kampot, Kandal, Kratie, Preah Vihear, Prey Veng, Pursat, Siem Reap, Sihanouk, Steung Treng, Svay Rieng, and Takeo.

⁵ RTTCs are located in Kampong Cham, Kandal, Prey Veng, and Takeo.

⁶ Tandon, P and Fukao, T (2015). Educating the Next Generation: Improving Teacher Quality in Cambodia, World Bank, Washington DC.

In addition, Prakas 963 of MoEYS in 2018 classifies TEC teaching staff into 3 ranks, (i) Lecturers, (ii) Associate Lecturers and (iii) Assistant Lecturers. This prakas helps TECs hire new lecturers based on clear selection standards and maintain quality education by preferentially assigning qualified teaching staff, or "Lecturers", to 12+4 programmes.

2.2.1.4. NIE

The National Institute of Education (NIE) located in Phnom Penh is the sole institution that offers a BA+1 PRESET programme to be upper secondary teachers. The application requirement for the NIE entrance exam is to have a bachelor's degree relevant to the course one takes in NIE. A number of the NIE trainers have a master's degree and some have a doctoral degree, many of whom have completed the degree in overseas higher education institutions.

A number of INSET/CPD programmes are offered by NIE, and some are associated with teacher qualification upgrade. It has been implementing a BA fast track programme through the government budget for around 3,000 lower secondary teachers who have been giving lessons at the upper secondary level due to a lack of teachers in their schools. It also established a New Generation Pedagogical Research Centre (NGPRC) in 2019 with technical support from KAPE to offer a master's degree of education in mentoring. This is also one type of teacher qualification upgrade programmes as the 25 first-batch students are mostly upper secondary teachers with BA+1. Some of these students will be appointed to NIE (2 persons), PTEC (3 persons) and BTEC (3 persons) after the completion of the course.

2.2.1.5. RUPP

While the Royal University of Phnom Penh (RUPP) is not a teacher education institution, it has been conducting TUP with financial support from the World Bank, which upgrades the educational qualification of around 2,000 lower secondary teachers from 12+2 to BA, without changing the cadre in the salary scale.

2.2.2. Comparison of the PRESET Curriculum

This section explores the PRESET curriculum of TECs and TTCs to see the gap between the 12+4 and 12+2 programmes, and considers what to be taught in teacher qualification upgrade programmes for primary and lower secondary teachers.

2.2.2.1. The TEC Curriculum Framework

The TEC curriculum framework has been developed by reference to the Singaporean NIE's Bachelor of Arts (Education) curriculum (National Institute of Education, Nanyang Technological University: NIE/NTU, 2017) to meet regional standards. On the other hand, it is designed to include the subjects currently taught in PTTCs and RTTCs, to be consistent with the Curriculum Framework of General and Technical Education (MoEYS, 2016) and to be in conformity with Cambodian National Qualifications Framework (Kingdom of Cambodia, 2014). The TEC curriculum framework consists of 134 credits for the primary education course and 136 credits for the lower secondary education course (see Table 5).

Table 5 Credits allocation of TEC 12+4 Curriculum

			Total			
No	Subjects	1	2	3	4	credits*
Prima	ry Education Course					
1	Education Studies (*including 6 credits for research)	6	6	4	5	21
2	Curriculum Studies	4	20	19	15	58
3	Subject Knowledge	21	2	2	2	25
4	Language Enhancement and Academic Discourse Skills (LEADS)	2	-	-	-	2
5	Essential course	1	1	1	1	6
6	Practicum	2	5	5	10	22
	Total credits	36	34	31	33	134
Lower	Secondary Education Course					
1	Education Studies (*including 6 credits for research)	6	6	6	4	22
2	Academic Subjects (In specialised subject(s))	20	15	10	10	55
3	Curriculum Studies (In specialised subject(s))					
	(A) Non-foreign language course	-	3	3	6	12
	(B) Foreign language course	-	6	6	12	24
4	LEADS					
	Non-foreign language course	5	3	3	3	14
	Foreign language course	2	_	_	-	2
5	Essential course	3	1	4	3	11
6	Practicum	2	5	5	10	22
	Total credits	38	39	37	48	162
(A) No	n-foreign language courses	36	33	31	36	136
(B) For	reign language courses	33	33	31	39	136

Source: TEC Curriculum Framework (MoEYS, revised in 2019)

It should be noted that each student earns 1 credit through: 15 hours of lectures plus 30 hours of self-learning (e.g., preparation, review, etc.); or 30 hours of practical training or experimental/laboratory work plus 15 hours of self-study; or 45 hours of field work.

As in Table 5, the 12+4 programme consists of the following areas of study:

- Education Studies covers the key concepts and principles of education, necessary for effective teaching and reflective practice in schools.
- Curriculum Studies is designed to give student teachers pedagogical knowledge and skills needed to teach specific subjects, according to the school curriculum.
- **Subject Knowledge** in primary teacher PRESET helps to reinforce subject content mastery for teaching.
- Academic Subjects in lower secondary teacher PRESET strengthens the subject knowledge and skills and deepens the conceptual understanding related to the subject.
- Essential Course introduces student teachers to the implications of living in a diverse society.
- Language Enhancement and Academic Discourse Skills (LEADS) equips student teachers with the basic language and voice skills that they require for teaching as well as to engage in academic writing of assignments and theses.

• **Practicum** helps student teachers acquire teaching competencies through practice teaching in a variety of contexts and at different levels under the supervision of TEC mentors and the teachers of their practicum schools.

The TEC curriculum framework will be the basis for the discussion about both the number of credits and the field of study in designing qualification upgrade programmes.

2.2.2.2. PTTC vs. TEC

The PTTC curriculum shifted from hour-based to credit-based in 2017, and can be summarized as in Table 6. according to the TEC curriculum framework. It offers 79 credits in total, all of which are compulsory.

Table 6 Comparison of the number of credits between PTTC and TEC (Primary)

No	Field of study	PTTC	TEC	Gap
1	Education Studies	19	21	2
'	(Research)	(6)	(6)	(O)
2	Curriculum Studies	19	58	39
3	Subject Knowledge	19	25	6
4	Language Enhancement and Academic Discourse Skills (LEADS)	2	2	0
5	Essential Course	8	6	(2)
6	Practicum	12	22	10
	Total credits	79	134	55

Source: PTTC curriculum (MoEYS 2017)

As seen in the table, while the PTTC curriculum is designed in a balanced manner so that student teachers comprehensively acquire a wide range of knowledge necessary for novice teachers within 2 years, the credits allotted to Curriculum Studies are almost one-third of those in the TEC curriculum. If the qualification of 12+2 primary teachers are to be upgraded, the programme should focus more on the acquisition of teaching methodology and associated subject matters rather than practicum as teachers-in-service are likely to be accustomed to classroom teaching. In addition, while the current PTTC curriculum allocates 6 credits to academic research, 12+2 teachers should go through it once again because there were only 16 hours of "pedagogical research" in the PTTC curriculum until 2016, which was instructed by the trainers who mostly did not have any experience of academic research.

2.2.2.3. RTTC vs. TEC

The RTTC curriculum is still hour-based, and so the number of credits given in the right-most column of Table 7 is not an official value but temporarily calculated for the discussion in this section. Even when we use a formula "1 credit = 30-hour lectures" for all the field of study but research and practicum, the total number of credits reaches 88, which seems to be a bit excessive for a 2-year programme in higher education. In Table 7, we can also find its emphasis on Academic Subjects to strengthen the subject knowledge of prospective lower secondary teachers.

Table 7 Distribution of teaching hours in the RTTC curriculum

No	Field of study in the TEC curriculum framework	Subjects given in the RTTC curriculum	Teaching hours (*)	Credits (**)
1	Education Studies	Psycho-pedagogy Inclusive education Child-friendly school General knowledge Administrative study Moral-Profession Workshop Library	651	22
	Research	Pedagogical research	16	0
2	Curriculum Studies	Teaching methodology	531	18
3	Academic Subjects	Basic knowledge Knowledge within lower secondary education	687	23
4	LEADS	Foreign language	116	4
5	Essential Course	Physical education - sport Agriculture Art Computer	277	9
6	Practicum		552	12
	Total Teaching Hours		2.830	88

Notes:(*) The RTTC curriculum allocates 1,218 hours to "Specialized Subject" that includes both teaching methodology and subject knowledge, and the hour-distribution to these two fields of study varies from 674:544 in the History/Geography course to 431:787 in the Khmer Literature/Home Economics course. The teaching hours given to "2. Curriculum Studies" and "3. Academic Subjects" in this table are the average of 6 courses listed in the RTTC curriculum.

Source: RTTC curriculum (MoEYS 2011)

Table 8 below shows the number of credits allotted to each field of study in the RTTC and TEC curricula. The comparison of the ratio of Curriculum Studies as to Academic Subjects indicates that the RTTC curriculum focuses more on Curriculum Studies while the TEC curriculum gives much emphasis on Academic Subjects. In contrast to primary teachers who are normally prepared as "generalists" because they are required to teach most of the subjects in the primary curriculum with careful attention to cognitive, affective and behavioural development of each child, lower secondary teachers, who are mostly subject teachers, are prepared as "subject specialists" so as to give far-seeing instruction that takes into consideration how the contents in lower secondary education will be connected to those of upper secondary and higher education, which provide a rationale for focusing on Academic Subjects in TTCs and TECs.

Table 8 Comparison of the number of credits between RTTC and TEC (lower secondary)

No	Field of study	RTTC	TEC	Gap
1	Education Studies	22	22	0
1	(Research)	(0)	(6)	(6)
2	Curriculum Studies	18	12	-6
3	Subject Knowledge	23	55	32
4	LEADS	4	14	10
5	Essential Course	9	11	2
6	Practicum	12	22	10
	Total Credits	88	136	48

^(**) The teaching hours are converted to the number of credits using the following formula: the teaching hours of "Research" and "Practicum" are divided by 45 as these are fieldwork basis; and others are divided by 30, not 15, because the lessons of TTCs mostly rely on the lecturing with homework and rarely require student teachers to do much preparation, such as reading relevant articles, preparing for presentation and discussion, etc.

A big difference is also found in the number of credits to Research and LEADS (or "Foreign Language" in the RTTC curriculum): the RTTC curriculum only allocates 16 hours to "Pedagogical Research" although it is highly unlikely to produce a research paper of a certain level in such a short period of time; and the RTTC curriculum simply promotes student teachers to study English while the TEC curriculum is designed to equip them with academic writing skills for their research.

2.2.3. Teacher Educators in TECs and TTCs

Teacher educators play a key role in maintaining and improving the quality of teacher education, and take on direct responsibility for how much prospective teachers acquire professional knowledge and skills in the TEIs. The Teacher Education Provider Standards (TEPS) stipulates the following conditions that the teaching staff of each teacher education provider should satisfy:

- Teaching staff who hold a qualification at least equal to the program they wish to teach and have at least 5 years of teaching experience, must not exceed 50 % of those teaching the programme;
- Teaching staff who hold a qualification at least one level higher than the programme they wish to teach and have at least 3 years of teaching experience, must constitute at least 50% of the total teacher educator force in the programme;
- Teaching staff who hold a qualification at least equal to the program they wish to teach and have teaching experience of less than 5 years can be assigned as assistant teacher educators; and
- Teaching staff must be competent in English, ICT and related educational media.

On the other hand, there are a number of critical issues around the teacher educators of TTCs and TECs, which are summarized as follows:

- Absence of a mechanism to continuously produce qualified teacher educators domestically;
- Difficulties to hire qualified teacher educators from other education institutions; and
- Lack of CPD opportunities for existing teacher educators to update and upgrade their professional knowledge and skills.

For the first point, the absence of a mechanism to produce MA-level teacher educators through domestic HEIs has not only made it difficult to supply new teacher educators in a planned manner, but also resulted in the current reliance on overseas scholarship programmes to supply teacher educators with a master's degree and with English and ICT skills. For the second, there was an optimistic expectation that there were at least 800 school teachers with a master's degree at the time of estimation, and the position of TEC lecturers will be easily filled by those people; however, in reality, 2 TECs, particularly Battambang TEC, face a problem of undersupply of qualified teacher educators due to a lack of applicants who satisfy the requirements for TEC lecturers. For the third, as with schoolteachers, a vast majority of teacher educators do not have an opportunity to be exposed to new ideas and concepts and acquire new knowledge and skills related to their specialized field after they start working in TEIs. Under such circumstances, the level of their professional knowledge and skills is likely to be deteriorated as time goes by, particularly in rural areas with scarce intellectual stimulation.

Currently TECs assign "associate lecturers" to some modules to compensate the lecturer shortage; however, this is obviously not a fundamental solution, and the shortage of qualified teaching staff is considered as a bottleneck in preparing and expanding teacher qualification upgrade programmes.

2.2.4. What programmes can offer for teacher qualification upgrade?

As described in Table 9 below, there are several options to upgrade the qualification of teachers from 12+2 to 12+4: some PRESET programmes could help the teacher preparation system yearly produce a certain number of primary and lower secondary teachers with a higher

educational qualification; and some INSET programmes could help individual 12+2 teachers upgrade the qualification to the BA level. It should be noted that TECs alone can contribute to increasing the number of those BA teachers only 1% of the population of primary and lower secondary teachers per year.

Table 9 Programmes for teacher qualification upgrade

PRESET	Target	Level	Note
12+4 (4 years)	New upper secondary school graduates	Lower secondaryPrimary (Pre-school)	Being implemented in TECs
BA+1 (1 year)	New BA graduates	Lower secondary	Not exist
INSET/CPD	Target	Level	Note
Long programme (60 credits)	All the 12+2 teachers in service	Lower secondaryPrimary(Pre-school)	Being implemented in RUPP as TUP for LS teachers
Short programme (30 credits)	12+2 teachers with BA in a relevant field	Mainly lower secondary	Not exist

Among those options in the table, while "12+2" (and 12+2) are called a "concurrent model" for initial teacher education, "BA+1" is called a "consecutive model", which focuses on teaching methodology because the student teachers are supposed to have intensively learnt the content knowledge of their subject in the preceding BA programme. This provides a reason that a consecutive model is more common for secondary teachers than primary teachers in many countries.

On the other hand, a "long programme" is a credit-based programme in which teachers in service earn credits by taking prescribed (not any) modules offered in teacher education providers. An example is the TUP conducted by RUPP as part of a World Bank project, offering a 60-credit INSET programme for around 2,000 lower secondary teachers with a combination of face-to-face and distance learning.

A "short programme" is also a credit-base programme for those 12+2 teachers who have studied in (mostly private) universities alongside the work in their school and received BA in the subject they teach in schools. This programme requires earning at least 30 credits among prescribed modules (Articles 14 and 17 in Prakas 1870), and the above teachers can accumulate the credits through INSET/CPD programmes or may be enrolled in TECs as paid part-time students to take necessary modules. This short programme does not target at those 12+2 teachers having BA in a discipline that is not necessarily associated with the subject they teach in schools, and such "teachers just having BA" are required to complete a long programme to be "teachers with BA specialized in teaching" or "qualified BA teachers". In addition, the table says that a short programme is mainly for lower secondary teachers, because there are few BA courses associated with primary and preschool education in domestic higher education institutions, except 12+4 in TECs.

Although TECs, NIE and RUPP will be key players who can directly contribute to teacher qualification upgrade, TTCs are unlikely to play this role at the same level due to the critical shortage of qualified teacher educators. However, there are several options to utilize the resources of TTCs for teacher qualification upgrade, such as using a TTC as satellite campuses of a TEC so that prospective teachers and teachers in service can learn some modules of the above PRESET or INSET programmes in those TTCs. This satellite campus model can be implemented with combination of (i) face-to-face lessons by available qualified TTC trainers, (ii) distance lessons connecting TTCs with a TEC through the internet, and (iii) learning through on-line materials including lesson videos that TECs produce.

2.3. Approaches by school category

The COVID-19 pandemic in the year 2020 has resulted in the suspension of intake to TEIs, such as PSTTC, PTTCs, RTTCs, TECs and NIE, in the school year 2020-21, which is likely to make the undersupply of teachers more serious in a few years' time, particularly in rural schools. It has also hit the Cambodia's economy, even temporarily, and it is still unclear how much the economic recession would affect the households and the enrolment of their children. In these unpredictable and uncertain times, this mid-term plan uses the most recent statistical data about teachers, rather than the projections based on the previous data, as the baseline to estimate the number of teachers to be upgraded to a bachelor's degree, which is as shown in Table 10 below. The numbers in the column C in the table will be modified based on the number of teaching staff given from the ministry's statistics.

Table 10 The estimated number of teachers for qualification upgrade to BA

	Α	В	С
School Category	Teaching staff in 2019-20	Target % in 2023 in ESP 2019-23	The estimated number of qualified BA teachers in 2023 (= A*B)
Primary	44,914	7 %	3,144
Lower secondary	27,738	15 %	4,160

Source: Public Education Statistics and Indicators 2018-19 and 2019-20 (MoEYS, 2019;2020)

2.3.1. Lower secondary teachers

In the target figure shown in Table 10, which is more than 4,100, the TUP conducted by RUPP is supposed to upgrade the qualification of around 3,500 lower secondary teachers from 12+2 to BA⁷, and 2 TECs will produce a total of 200 new 12+4 lower secondary teachers in each of the year 2022 and 2023. Therefore, ideally around 1,000 new qualified BA teachers are to be produced by the year 2023.

Among those listed in Table 9 in the previous section, long and short INSET/CPD programmes can be offered to the lower secondary teachers in service, and BA+1 PRESET can be additionally offered when the necessary conditions are met.

Those long and short INSET/CPD programmes can be conducted by NIE, RUPP and TECs in face-to-face mode of study in between academic years combined with distance/e-learning mode. While the 30-credit short programmes should be intensively carried out within a year, the 60-credit long programmes can be completed in 2 years or in longer years. It will promote teacher qualification upgrade if TECs can accept in-service teachers as part-time students so that they can take some modules on the day and time when they do not have lessons in their lower secondary schools.

The needs of upgrading lower secondary school teachers are much higher than those of primary school teachers and so it must be most prioritized among all the school categories.

2.3.2. Primary teachers

Table 10 indicates that more than 3,100 teachers should be upgraded to achieve the ESP target, because there are not any teacher qualification upgrade programmes for 12+2 primary teachers.

Among those listed in Table 9 in the previous section, long and short INSET/CPD programmes can be offered to the lower secondary teachers in service. The BA+1 PRESET is unlikely to be

⁷ Secondary Education Improvement Project (SEIP) has been implementing upgrading programmes for 12+2 to BA degree level by 2021, and General Education Improvement Project (GEIP) is planning to implement the programmes for 1,500 by 2023 at the preappraisal stage as of December 2020.

offered to primary teachers as a consecutive model of PRESET structurally include fewer modules on teaching methodology that is central to teaching and learning at the primary level.

As in lower secondary, those long and short INSET/CPD programmes can be conducted by NIE, RUPP and TECs in face-to-face mode of study in between academic years combined with distance/e-learning mode. However, a problem of capacity of TEIs will arise when these programmes are conducted in parallel with those for lower secondary teachers.

2.3.3. Pre-primary teachers

The situation regarding upgrading qualifications of pre-primacy teachers is far behind that of basic teachers. The educational background of most pre-primary teachers is secondary education, as recorded in EMIS 2018-19 and shown in Table 11 below (upper secondary 58.35%, lower secondary 32.48%, primary 3.64%); only 5.53% are graduates or above. More controversially, most of them are community teachers who are not government staff.

Table 11 Educational background of pre-primary teachers

	[A]	[B]	[C]	[D]	[E]	[F]	[H]
Year	Primary	Lower Secondary	Upper Secondary	Graduate	Post-Graduate	PhD	Total
2011	193	2,168	1,494	25	1	0	3,881
2012	169	2,180	1,773	30	0	0	4,152
2013	180	1,926	2,380	51	0	0	4,537
2014	192	1,989	2,565	91	2	0	4,839
2015	175	1,682	2,538	140	2	0	4,537
2016	181	1,662	2,814	218	2	0	4,877
2017	187	1,670	3,000	279	5	0	5,141
2017 (%)	3.64%	32.48%	58.35%	5.43%	0.10%	0%	100%

It will therefore take many more years to upgrade them in the future, and various training programmes will need to be strategically designed and implemented step by step. One realistic option in future might be to introduce 12+4 programmes to produce the leaders of pre-school teachers. However, this would need more time for discussion on the programmes itself and appropriate certificate system accordingly. This will come at later stage when MoEYS proceed with the qualification upgrade of basic education.

For designing preschool teacher qualification upgrading programmes, it should include 45 credits of study on the 7 compulsory subjects/modules (namely, Khmer language education, Mathematics education, Life environmental studies education, English education, Physical and health education, Art education, Educational play and games) according to the Prakas No.1870, articles 10-12. The other 15 credits can be earned through elective modules based on each TEI's vision and principle.

2.3.4. Private school teachers

The education background of private school teachers is quite different from teachers in public schools. Almost over half of private teachers (58.37%) obtain degrees and 5.01% also have post-graduate degrees (see Table 12 below). However, although there is not reliable statistical data, it is presumed that most of these private school teachers with BA/MA do not have sufficient pedagogical training because no public/private universities offer post-graduate certificate programme specialised in teaching and learning in primary or lower secondary schools.

Table 12 Educational background of private school teachers

	[A]	[B]	[C]	[D]	[E]	[F]	[G]
Year	Primary	L. Sec	U. Sec.	Graduate (BA)	Post- Graduate (MA)	Ph D	Total
2015	379	1,030	3,856	4,544	503	0	10,312
2016	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
2017	187	739	3,742	6,988	579	13	12,248
2018	186	815	3,941	7,877	662	15	13,496
2018 (%)	1.38%	6.04%	29.20%	58.37%	4.90%	0.11%	100%

For quality control purposes, therefore, MoEYS should conduct research to clarify how much pedagogical training in-service private school teachers have received, prepare regulations for private schools to hire teachers having sufficient pedagogical training, and establish a mechanism through which un- or under-trained private school teachers can study necessary modules in TEIs.

2.4. Strategies for teacher qualification upgrade

2.4.1. Basic Principle

As discussed in the previous section, there are not so many approaches to supply teachers having BA specialized in teaching, or "qualified BA teachers", to schools. Thus, in order to constantly produce hundreds of such qualified teachers, it is absolutely necessary to combine those approaches so that more people participate in upgrade programmes, as illustrated in Figure 2, which would be followed by gradually developing the capacity of each qualification upgrade programme without deteriorating the quality of teaching and learning. Given that currently there are at most 30,000 lower secondary teachers, the vast majority of them will be "qualified BA teachers" within 20 years if more than 1,500 teachers are newly produced through 12+4 or BA+1 PRESET or upgraded through long or short INSET/CPD programmes every year, although 12+2 teacher will remain as long as 12+2 PRESET exists.

2.4.2. Legal framework

A legal framework for designing teacher qualification upgrade programmes is given by the MoEYS Prakas (ministerial order) No. 1870 issued in 2019, in which the number of credits, the field of study, the way of credit reduction based on the years of teaching experience and on the bachelor's degree one has, etc., are prescribed.

Table 13 and Table 14, taken from Articles 10 and 13, show the minimum number of credits compulsory for primary and lower secondary teachers to upgrade the qualification, respectively. As indicated in the tables, the qualification upgrade programmes for 12+2 primary teaches focus more on curriculum studies (i.e. teaching methodology), while those for 12+2 lower secondary teachers place a particular emphasis on the academic subject to help them teach lower secondary school subjects based on the understanding about how the concepts will be developed throughout lower secondary, upper secondary and higher education.

Table 13 The minimum number of credits compulsory for primary teachers to upgrade the qualification

	Fields of study	The number of credits compulsorily earnt in TEIs	Compulsory modules
1	Education Studies	6	Education (child/developmental) psychologyClassroom managementAssessment
2	Subject Knowledge	14	Contents on the following subjects at the primary or secondary levels • Khmer • Mathematics • Social studies • Science • English
3	Curriculum Studies	21	The following subjects related to the theory and practice on teaching and learning in primary schools • Khmer language education • Mathematics education • Social studies education • Science education • English education • Physical education • Art education • Health education
4	Language enhancement	2	Academic reading and writing in English
5	Education Research	3	Theory on research Action research
6	Practicum	0	
7	Essential Course	4	Education counselling (for primary children)Education for children with special needs
	Electives	10	(Each TEI conducts additional modules.)
	Total	60	

Table 14 The minimum number of credits for lower secondary teachers to upgrade the qualification

	Fields of study	The number of credits compulsorily earnt in TEIs	Compulsory modules
1	Education Studies	6	 Education (child/developmental) psychology Classroom management Assessment ICT in education
2	Academic Subject	22	(Modules related to the one's subjects at the secondary or higher levels)
3	Curriculum Studies	9	(Modules on teaching and learning related to the subject one teaches)
4	Language enhancement	6	Academic reading and writing in English
5	Education Research	3	Theory on research Action research
6	Practicum	0	
7	Essential Course	4	Educational counselling and career guidanceEducation for students with special needs
	Electives	10	(Each TEI conducts additional modules.)
	Total	60	

Table 15 Relevant degrees for lower secondary teachers to get a reduction of credits

Subject	Bachelor of Arts or higher degree in
Khmer	Khmer literature
Mathematics	Mathematics, Applied Mathematics
Sciences	Physics / Chemistry / Biology / Earth Science
Social studies	History / Geography / Economics / Philosophy / Public Administration
English	English literature / Sociolinguistics / Applied linguistics
French	French literature / Sociolinguistics / Applied linguistics
Art	Art / Music / Dance
Physical education	Sports / Sports Science / Physical education
ICT	ICT / Technology

Table 16 Experience-based reduction of the number of credits

	Years of teaching experience	The number of credits reduced	Minimum number of credits necessary for qualification upgrade
1	1 to 4 years	No reduction	60
2	5 to 10 years	3 credits from electives	57
3	11 to 15 years	6 credits from electives	54
4	16 years or more	9 credits from electives	51

As in Table 15 of Article 16, Prakas 1870 also defines the disciplines that are recognized as "BA in a relevant field" for BA+1 PRESET or short programmes. For example, if a 12+2 lower secondary mathematics teacher received BA in mathematics or in applied mathematics from a (private) university, then they would be accredited as a "qualified BA teacher" by earning 30 credits. Articles 14 and 17 prescribe the composition of these 30 credits in a way that primary / lower secondary teachers with a bachelor' degrees or higher degree in primary education / lower secondary subjects are required to earn at least 30 credits which are Education Study 4 credits, Curriculum Study 9 credits, Education Research 3, Essential Course 2, and Elective 12 credits.

Table 16 of Article 19 shows how many credits are reduced from the above-indicated minimum number of credits based on the years of teaching experience, which would facilitate experienced teachers to earn the necessary number of credits in a shorter period of time.

All the teacher qualification upgrade programmes are supposed to be designed based on this Prakas so that the teacher education system can ensure the equivalence between qualified BA teachers in terms of professional knowledge and skills.

2.4.3. Strategies for teacher qualification upgrade

Based on the discussion above, the following four strategies are proposed to ensure that qualified BA teachers will be produced on a regular basis, and this new standard will be rapidly generalized in teacher education by 2025.

- Strategy 1: Enhancing the capacity to supply 12+4 teachers through TECs
- Strategy 2: Conducting BA+1 PRESET to respond to immediate teacher needs
- Strategy 3: Establishing a mechanism to upgrade qualification through the long programme
- Strategy 4: Promoting 12+2 teachers with BA to participate in the short programme

Strategy 1: Enhancing the capacity to supply 12+4 teachers through TECs

The ongoing 12+4 PRESET is a core component in teacher qualification upgrade because it regularly produces qualified BA teachers. However, the admission quotas for the 12+4 primary teacher and lower secondary teacher preparation programmes are 300 and 200, respectively, in the 2018 and 2019 school years, which account for less than 1% of teacher population at each level. There are vertical and horizontal dimensions to enhance the capacity to supply 12+4 teachers: (i)

increasing the admission quota for the existing 2 TECs in the short and medium term, and (ii) increasing the number of TECs in the medium and long term. The former includes an idea that one TEC regards neighbouring PTTCs and RTTCs as its satellite campuses where a number of students in the locality can take 12+4 modules by a combination of distance learning, face-to-face lessons in the TTC, and schooling in the TEC. On the other hand, a bottleneck to the development of teacher supply capacity is a lack of qualified teacher educators in TECs. Thus, it is indispensable to hire new lecturers and re-train the existing teaching staff to prepare for such expansion, although MoEYS also needs to make every effort to attract competent individuals by upgrading the status of TEC and its teaching staff, such as efforts to recruit teacher educators need to take a labour market perspective; upgrading of qualifications need to be complemented by competitive reward, professional development opportunities and working conditions.

Main Actions related to Strategy 1 are proposed as shown in the Table 17 below.

Table 17 Main Actions for Strategy 1

Main Actions	Timeline
1. Increase the admission quota for 2 TECs	
1.1. Gradually increase the number of TEC students up to 500 and 300 for primary and lower secondary, respectively.	2021-2023
1.2. Gradually suspend the 12+2 courses in TECs.	2021-2023
1.3. Intensively recruit qualified teaching staff for TECs	2021-2023
1.4. Prepare and implement a 12+4 distance learning course	2021-2023
1.4.1. Select satellite TTCs and qualified TTC trainers	2021
1.4.2. Develop a distance learning course	2022
1.4.3. Give training to trainers in charge of the distance course	2022
1.4.4. Start the distance learning course	2023-
1.4.5. Increase the number of TECs	
2. Set clear criteria for the next TECs and select potential TTCs	2022
2.1. Revise the TTC curriculum to align with the TEC curriculum standards	2023
2.2. Prepare the above TTCs to become TECs	2023-2024
2.3. Officially establish new TECs by Sub-decree	2023
2.3.1. Select, appoint, and train the management staff of the new TECs	2023-2024
2.3.2. Recruit/select and train the teaching staff of the new TECs	2024-2025
2.3.3. Develop infrastructure and prepare equipment for the new TECs	2024-2025
2.4. Start 12+4 PRESET in new TECs	2025-

Strategy 2: Conducting BA+1 PRESET to respond to immediate teacher needs

Currently a BA+1 PRESET programme, in which those who have an BA in a discipline related to subjects taught in schools receive one-year professional training in pedagogy and teaching, is conducted only in NIE to produce upper secondary teachers. Strategy 2 suggests offering a BA+1 programme as initial lower secondary teacher education, as TPAP envisioned in 2015. The BA+1 PRESET should be designed by reducing and reorganising the TEC curriculum with a special emphasis on education studies, curriculum studies, educational research including academic writing in English, and practicum. Potential BA+1 providers are TECs and NIE which have teaching staff specialized in subject teaching methodology. However, it would be necessary to conduct preliminary survey about how much popularity it will gain among university graduates, and who will choose BA+1 for lower secondary teachers rather than BA+1 in NIE. For example, if the survey results indicate that a number of university graduates look for a job in a rural province where their hometown locates, a BA+1 PRESET can be piloted with a small number of students targeting at a

few provinces. Given that labour market forces and/or the respective salary scales (cadre) are likely to determine whether candidates opt to undertake a BA+1 for lower secondary teachers or BA+1 in NIE, strategies may be needed to make the former more attractive: these might include an effective communications strategy, incentives and professional development opportunities for candidates who choose this option.

The advantage of BA+1 PRESET is that it can quickly supply teachers to the schools suffering from critical teacher shortage. Thus, one of the policy options is to use BA+1 graduates for filling the vacancy of lower secondary schools in a remote area, by ensuring that those new teachers will be preferentially transferred to an urban school if they show a good work performance in such a difficult situation. There is extensive evidence that newly trained teachers only perform well in remote schools if they receive extensive, good quality support from more experienced colleagues during this time. It would be thus desirable to include a probation/induction or mentorship programme for the first two or three years in post, to ensure these novice teachers receive the necessary support and supervision to allow them to develop into competent and committed classroom teachers.

Main Actions related to Strategy 2 are proposed as shown in the Table 18 below.

Table 18 Main Actions for Strategy 2

	Main Actions	Timeline
1.	Conduct small survey for needs analysis	
	1.1. Design and conduct survey and analyse the needs of BA+1	2021
	1.2. Select the target provinces for BA+1	2021
2.	Implement BA+1	
	2.1. Select a BA+1 provider (NIE or TECs) and set a quota for pilot BA+1	2021
	2.2. Develop a BA+1 programme to align with the TEC curriculum standards	2022
	2.3. Implement BA+1 on a pilot basis	2022-

Strategy 3: Establishing a mechanism to upgrade qualification through the long programme

Another way for the planned increase of qualified BA teachers is to implement a number of INSET programmes for teacher upgrade purposes. There are a few long INSET/CPD programmes so far conducted for teachers, such as: TUP for lower secondary teachers in RUPP; Fast Track Programme for lower secondary teachers in NIE; and Basic Teacher Training for primary teachers in RTTCs. The characteristics of these programmes are summarised in Table 19 below.

Table 19 Existing upgrade programmes for primary and lower secondary teachers

Name	Target	Implementing institutions	Budget	Salary scale upgrade	Qualification upgrade	Credits / Duration
Teacher Upgrade Programme	Around 2,000 lower secondary teachers in target schools	RUPP	Word Bank project	None	From 12+2 to BA	60 credits in 2 years
Fast Track Programme	Around 3,000 lower secondary teachers teaching in upper secondary schools	NIE	Programme Budget (PB)	From Cadre B to A	From 12+2 to BA	60 credits in 1 year
Basic Teacher Training	Primary teachers	RTTC	Programme Budget (PB)	From Cadre C to B	None	2 times of 1.5 months

This strategy includes several INSET/CPD modalities, such as: implementing a DP- or statefunded 60-credit upgrading programme, like TUP above, for a fixed period of time [Fixed programme]; and/or offering a 60-credit upgrading programme open to any 12+2 teachers [Open programme]. For the former, MoEYS should limit the number of participating teachers (because it is costly) and prioritize the teachers in remote areas, which would encourage teacher redeployment to these areas if the employment conditions and opportunities for career progression are right. For the latter, it should allow all the eligible teachers to earn 60 credits in a longer period (e.g., 10 years) or without setting any time limitation, but be implemented as a "fee-charging" programme in principle to promote the financial autonomy of TECs while MoEYS should allocate budget to take special measures for the teachers in rural areas or in difficult schools (e.g., providing a voucher, getting a discount, etc.). Both of these would be implemented by combining face-to-face lecturing and mentoring with distance learning. While TECs, NIE and RUPP are candidate implementors, PTTCs and RTTCs can play a complementary role in conducting some modules in the open programmes. In addition, the time and labour to develop the compulsory part of long programmes can be reduced by using the existing TEC course syllabi and materials. Furthermore, the participating teachers can count the credit earned from undertaking discrete CPD activities outside TEIs within the parameters set out in the accreditation process..

Main Actions related to Strategy 3 are proposed as shown in the Table 20 below.

Table 20 Main Actions for Strategy 3

Main Actions		Timeline
1. Develop the long programmes		
1.1. Prepare a set of modules for the 60-credit pre and using the existing TEC course materials.	ogrammes in reference to Prakas 1870	2021
1.2. Develop detailed plans for Fixed and Open p	programmes, including such	2021
information as: the target group, the number	of participants, implementing	
institutions, the mode of delivery, selection c	riteria and procedure, implementation	
timeline, etc.		
1.3. Prepare a budget plan and mobilize financial	support from DPs.	2021-2022
1.4. Prepare teacher educators and training mate	rials.	2022
2. Implement Fixed programmes		
2.1. Select the training participants.		2022
2.2. Start implementing the short programmes		2022-
3. Start implementing the short programmes		2022-

Strategy 4: Promoting 12+2 teachers with BA to participate in the short programme

The target group for a short programme is the 12+2 teachers who hold BA degrees in the discipline they teach in schools. They are mostly lower secondary teachers because there are few domestic universities that offer BA specialized in primary education. As seen in Table 21, the number and proportion of teachers with BA has been increasing for the past 5 years in both of the primary and secondary levels⁸.

⁸ In the table of the secondary level, the figures of primary and lower secondary graduates are supposed to be gradually decreased year by year, but the number of primary graduates has been increased despite no intake of primary school graduates as secondary teachers recently, which requires further investigation.

Table 21 Educational qualifications of primary and secondary teachers

	Primary level					Secondary level (L.Sec. + U.Sec.)						
	Pri	L.Sec.	U.Sec.	ВА	MA	PhD	Pri	L.Sec.	U.Sec.	ВА	MA	PhD
2019-20	1,428	10,062	26,904	6,256	230	4	816	5,711	16,465	18,420	1,302	18
2018-19	958	10,569	28,916	5,271	179	0	512	5,016	18,799	16,985	1,191	10
2017-18	1,071	11,490	28,655	4,480	129	1	594	5,290	18,853	15,423	1,004	4
2016-17	1,104	12,521	28,701	3,585	95	3	494	5,084	20,305	14,231	995	12
2015-16	1,175	13,445	27,159	3,027	78	0	291	5,821	20,684	13,238	889	1

Source: MoEYS Education Statistics & Indictors 2015-16; 2016-17; 2017-18; 2018-19; 2019-20

However, on the other hand, the teachers in this target group often apply for BA+1 in NIE to become upper secondary teachers with upgrading the salary scale to the cadre A, which is a flaw in the current teacher education system that causes a loss of human resources in basic education. Therefore, the actions in Strategy 4 should be complemented by MoEYS's initiatives to create mechanisms that encourage teachers to stay in basic education, such as implementing the Teacher Career Pathways (TCP) and revising the salary scale to reflect the educational qualification of teachers, providing stronger support for primary and lower secondary schools to improve teaching and learning environment, etc. This would allow both horizontal and vertical promotion within the primary and lower secondary education sectors and lead to attraction and retention of motivated, able, appropriately-qualified teachers in both.

The 30-credit short programme is prepared based on Articles 14 and 17 of Prakas 1870. As Strategy 4 aims to accelerate the qualification upgrade process, the programme should be designed in the way that all the participants can complete the course within 1 year by combining the face-to-face mode with distance learning. Strategy 4 also envisions TECs, NIE and RUPP as candidate implementors, and each institution can customize the elective subjects of 12 credits to differentiate the programme from others. The participating teachers can be selected from all the provinces in favour of rural/remote schools. The 18-credit compulsory part of short programmes can be developed with less time and labour by using the existing TEC course syllabi and materials. Furthermore, the participating teachers can count the credit earned discrete accredited CPD activities undertaken outside TEIs.

Main Actions related to Strategy 4 are proposed as shown in the Table 22 below.

Table 22 Main Actions for Strategy 4

	Main Actions	Timeline
1.	Develop the short programmes	
	1.1.Prepare a set of modules for the 30-credit programmes in reference to Prakas 1870 and using the existing TEC course materials.	2021
	1.2.Develop a detailed plan, including such information as: the number of participants, implementing institutions, the mode of delivery, selection criteria and procedure, implementation timeline, etc.	2021
	1.3.Prepare a budget plan and mobilize financial support from DPs.	2021-22
	1.4.Prepare teacher educators and training materials.	2022
2.	Implement short programmes	
	2.1.Select the training participants.	2022
	2.2.Start implementing the short programmes	2022-

2.4.4. Consideration of "how many by when"

The target figures in the mid-term plan for teacher qualification upgrade are supposed to be aligned with the national goal⁹.

(1) Total number of lower secondary teachers to upgrade (up to 2023): 4,500

Taking into consideration an expected slight increase in the number of lower secondary teachers in the next few years due to the COVID-19 pandemic, this mid-term plan sets the teacher qualification upgrade target as 4,500, which accounts for 15.8% of the baseline figure of 28,422¹⁰ in the academic year of 2018/19, and proposes to annually review the above target based on the actual increase of lower secondary teachers. Table 23 shows the target number of lower secondary teachers to be upgraded equal to BA level by which programmes by when. Table 24 shows the brief concept summary of CPD programmes for such purpose.

Table 23 Number of lower secondary teachers to upgrade by modalities

MODALITIES	2021	2022	2023	TOTAL
PRESET				
12+4	-	200 (fixed)	200 (fixed)	400 (fixed)
BA+1	-	-	-	-
INSET				
SHORT-TERM CPD	-	-	1,000	1,000
LONG-TERM CPD	-	-	-	-
TUP (WB/RUPP)	2,000 (fixed)	-	1,500 (fixed)	3,500 (fixed)
	•	4,500		

Table 24 Brief summary of CPD programmes for lower secondary teachers to updrade equal to BA level

	Short-Term CPD	Long-Term CPD			
Target group	RTTC 12+2 teachers with BA in a field relevant to subject they teach	RTTC 12+2 teachers without BA / with BA in the field irrelevant to the subject they teach			
Target number	1,000	0			
implementation institutions	NIE, TEC	NIE, TEC, RUPP			
Course duration	1 year (program on campus is expected in Aug- Sep during vacation)	2 years (program on campus is expected in Aug-Sep during vacation)			
Capacity as per unit	25 trainees as per one unit - NIE: 25*8 classes/year*2=500 - TEC: 25*8 classes/year*2=500	25 trainees as per one unit NIE: 25*0 classes/year*1=0 TEC/RUPP: 25*0 classes/year*1=0			
mode of delivery	Combinatoin of (i) online programme, using the video materials which will be produced by TEC; and (ii) face-to-face programme which focuses on practice-based contents.				
selection criteria and procedure	TBD	TBD			
implementation timeline	2022-2023	2022-2024			
# of Credits	30	60			

(2) Total number of primary teachers to upgrade (up to 2023): 3,200

⁹ The target figures of teacher qualification upgrade in the mid-term plan include the teachers who will be educated in the 12+4 program as the ESP 2019-2023 indicators are "the percentage of lower secondary/ primary teachers who complete BA through teacher education courses" (ESP 2019-2023 p28).

¹⁰ The source of the baseline figure 28,422 is "Teacher Education Subsector Analysis Report (2019, E-TEC)", of which p45-57 explain calculation procedures.

Similar to lower secondary, this mid-term plan sets the teacher qualification upgrade target of primary as 3,200, which accounts for 6.9% of the baseline figure of 46,587¹¹ in the academic year of 2018/19, and proposes to annually review the above target based on the actual increase of primary school teachers. Table 25 shows the target number of primary teachers to be upgraded equal to BA level by which programmes by when. Table 26 shows the brief concept summary of CPD programmes for such purpose.

Table 25 Number of primary teachers to upgrade by modalities (by year up to 2023)

MODALITIES	2021	2022	2023	total
PRESET				
12+4	-	300 (fixed)	300 (fixed)	600 (fixed)
BA+1	-	-	-	-
INSET				
SHORT-TERM CPD	-	800	800	1,600
LONG-TERM CPD	-	-	1,000	1,000
	TOTAL		•	3,200

Table 26 Brief summary of CPD programmes for primary teachers to upgrade equal to BA level

	Short-Term CPD	Long-Term CPD
Target group	PTTC 12+2 teachers with BA in the field relevant to education	PTTC 12+2 teachers without BA/ with BA in the field irrelevant to education
Target number	1,600	1,000
implementation institutions	NIE, TEC, RUPP	NIE, TEC, RUPP
Course duration	1 year (schooling is expected in Aug- Sep during vacation)	2 years (schooling is expected in Aug-Sep during vacation)
capacity as per unit	25 trainees as per one unit NIE: 25*10 classes/year*2=500 TEC: 25*14 classes/year*2=700 RUPP: 25*8 classes/year*2=400	25 trainees as per one unit NIE: 25*10 classes /year*1=250 TEC: 25*20 classes/year*1=500 RUPP:25*10 classes /year*1=250
mode of delivery	Combination of (i) online programme, us produced by TEC; and (ii) face-to face prontents.	rogramme which focuses on practice-based
selection criteria and procedure	TBD	TBD
implementation timeline	2022-2023	2022-2024
# of CreditS	30	60

2.5. Budget for implementation

To implement the upgrading programmes mentioned in the section 2.4.4, MoEYS will allocate necessary cost. The rough budget plan is shown in the tables below.

¹¹ The source of the baseline figure is "Teacher Education Subsector Analysis Report (2019, E-TEC)", of which p27-39 explain calculation procedures.

Table 27 Budget estimation for TQU programmes (long/short-term CPD programes) for lower secondary teachers by year up to 2023

TQU F	Programme (Lo	ng-Term CPD)				
Year	Participants	Tuition Fees/ Programme	Allowance/ Programme	TOTAL	Contingency (5%)	TOTAL PROGRAMME COST
2021	0			_	_	_
2022	0	\$1.150,00	\$2.900,00	_	_	_
2023	0	\$1.150,00	\$2.900,00	_	_	_
		TOTAL		_	_	_
TQU F	Programme (Lo	ng-Term CPD)				
Year	Participants	Tuition Fees/ Programme	Allowance/ Programme	TOTAL	Contingency (5%)	TOTAL PROGRAMME COST
2021	0			_	_	_
2022	0	\$575,00	\$1.450,00	_	_	_
2023	1.000	\$575,00	\$1.450,00	\$2.025.000,00	\$101.250,00	\$2.126.250,00
	•	TOTAL		\$2.025.000,00	\$101.250,00	\$2.126.250,00
Total I	Project Cost Lo	wer Secondary				\$2.126.250,00

Table 28 Budget estimation for TQU programmes (long/short-term CPD programes) for primary teachers by year up to 2023

TQU F	Programme (Lo	ng-Term CPD)				
Year	Participants	Tuition Fees/ Programme	Allowance/ Programme	TOTAL	Contingency (5%)	TOTAL PROGRAMME COST
2021	0					
2022	0	\$1.150,00	\$2.900,00	_	_	_
2023	1.000	\$1.150,00	\$2.900,00	\$4.050.000,00	\$202.500,00	\$4.252.500,00
		TOTAL		\$4.050.000,00	\$202.500,00	\$4.252.500,00
TQU F	Programme (Lo	ng-Term CPD)				
Year	Participants	Tuition Fees/	Allowance/	TOTAL	Contingency	TOTAL PROGRAMME
		Programme	Programme		(5%)	COST
2021	0			_	_	_
2022	0	\$575,00	\$1.450,00	\$1.620.000,00	\$81.000,00	\$1.701.000,00
2023	800	\$575,00	\$1.450,00	\$1.620.000,00	\$81.000,00	\$1.701.000,00
	•	TOTAL		\$3.240.000,00	\$162.000,00	\$3.402.000,00
Total I	Project Cost Lo	wer Secondary				\$7.654.500,00

In cases of involving the online learning, the allowance shall be adjusted in due course and such details are to be discussed at a later stage.

2.6. Present and future challenges

To accelerate the process of teacher qualification upgrade, wide range of issues are to be solved such as:

- Accreditation of the qualified TEIs
- Shortage of qualified teacher educators
- Incentives for the qualified teachers inclusive of in-service teachers
- Lack of long-term strategy which identify the concrete plan for supplying qualified teacher educators constantly
- Need for a holistic bundle of strategies to attract suitable candidates to teacher education and retain them in the teaching profession

Challenges (1)-(3) are to be tackled with in a short term, and challenges (4) and (5) are to be tackled in medium and longer terms.

2.6.1. Short-term challenges

2.6.1.1. Accreditation of upgrade programmes

Prakas No.1870 (2019) stipulates that:

- TEIs include PSTTC, PTTCs, RTTCs, TECs, and NIE (Article 4),
- The Ministry of Education, Youth and Sport gives permission to conduct TQU programmes (Article 5), and
- Preschool, primary and lower secondary teachers with an associate degree, or 12+2, can earn the credits necessary for qualification upgrade in the TEIs above (Article 7)

This suggests, but does not state explicitly, that only TEIs can conduct TQU programmes that are accredited by MoEYS. The rationale for this decision is likely to be that MoEYS needs to maintain the quality and standards of teacher education, with modules of the same title being conducted at the same level, irrespective of the provider.

The accreditation of TQU programmes is one of the tasks of the Committee for Teacher Development (CTD), which is chaired by His Excellency the Minister of MoEYS. Article 5 of Prakas No.314 (2017) stipulates the roles and responsibility of the CTD, and that the CTD validates programmes related to teacher training and development.

On the other hand, what is missing from the previous discussion about TQU is who will be responsible for planning and managing the programmes. The CPD Management Office (CPDMO) in collaboration with MoEYS TDs, especially TTD, is responsible for planning CPD programmes for teachers, accrediting CPD providers, and mobilizing financial and human resources to implement those programmes, which could include TQU programmes for 12+2 teachers, facilitating the accreditation process through CTD. TTD is responsible for planning and implementing BA-equivalent PRESET, including BA+1 and 12+4. Since the CPD credit acquisition system closely aligns with the Cambodian HEI and TEI credit system, all the PRESET and INSET activities can interact in an integrated manner, with significant TTD and CPDMO involvement.

2.6.1.2. Attribution of the credits gained through CPD programmes

The CPDMO will be responsible for CPD credit assignment and recording and will administer the credits gained through all CPD programmes.

CPD credits are awarded on the basis of the:

- Number of structured or self-directed CPD hours successfully undertaken
- Number of hours of self-study associated with the structured or self-directed CPD hours
- Quality and content of CPD programme and activities, including competencies promoted (benchmarking and standards)
- Evaluation and assessment (demonstration of output and demonstration of outcome).

For more detail of the CPD credit system, please consult the CPD Credit Acquisition System (2020).

1) Number of CPD hours successfully undertaken and credited

Because CPD is an active, not a passive process, attending a workshop or training course is not sufficient to earn CPD credits. In order to ensure that CPD credits are only awarded for CPD of good quality, in which the participants have actively participated and which they have applied to their professional practice, "number of hours" of CPD undertaken alone is not considered an appropriate basis for CPD credit attribution: In order to gain CPD credits, the CPD activities need to meet benchmarks (minimum standards) of quality and content. Teachers need to demonstrate through assessment tasks both outputs (productions) and outcomes (positive change) which are measurable and of sufficient quality, in order to be awarded credits for the CPD undertaken.

The basic principle of allocating CPD credits is that a CPD activity consisting of 15 hours face-to-face + 30 hours self-study or 45 hours laboratory or fieldwork (or a combination) which conforms to accepted benchmarks of quality and measurable output/outcomes may earn one credit.

In the case of self-directed CPD, which does not include any face-to-face contact time, this is replaced by the notion of "input" from an accredited source, such as a MOOC, professional journal or textbook. Thus, for self-directed CPD, a similar principle applies in that a CPD activity consisting of 15 hours "input" from an acceptable source + 30 hours self-directed practical work, research, or application of the input which conforms to accepted benchmarks of quality and measurable output/outcomes may earn one credit as shown in Figure 3.

One CPD credit is awarded for:

- 15 hours face-to-face + 30 hours self-study or self-directed practical work, research, or application of the input or 45 hours laboratory or fieldwork (or a combination) OR
- 15 hours "input" from an acceptable source + 30 hours self-study or self-directed practical work, research, or application of the input or 45 hours laboratory or fieldwork (or a combination)
- which conforms to accepted benchmarks of quality and measurable output/outcomes

Figure 3 CPD credit attribution formula

This credit attribution formula follows that of TQU, as specified in Prakas 1870. The CPD credit system also aligns with the credit system for preservice teacher education. Within these parameters, a TEI/HEI offering a CPD activity needs to apply for these to be accredited by the CPDMO (see CPD Handbook, 2020, on accreditation of CPD providers and offerings), in order to ensure that the activity and its credits correspond to the Cambodian Teacher Professional Standards (2010) or CPD competency standards (2020) to allow CPD credits to contribute to a TQU. The CPD credit system will allow teachers continuously engaged in accredited CPD to earn cumulative credits so that they can upgrade their qualifications within a shorter timeframe. The following section details how credits are attributed for CPD activities in relation to the TQU.

2) Credit attribution for structured CPD

When structured CPD is undertaken through an accredited CPD provider such as a TEI/HEI, either at a school or the TEI/HEI, the provider informs the relevant level responsible for entering CPD information in the HRMIS of the list of teachers who have successfully undertaken a given CPD activity, including dates, venues, scores obtained, etc. The data entry in HRMIS may be performed by the school or TEI/HEI itself, the DOE, POE or CPDMO, depending on the location and level of connectivity of the school. The information is entered at the most decentralised level possible: at school or TEI/HEI level where possible. This information is captured in the HRMIS using the appropriate form. The HRMIS already includes accredited CPD providers and offerings, which have been judged to meet the benchmarks and requirements (see CPD Handbook, 2020, on accreditation of CPD providers and offerings); these will appear as drop-down menus within the HRMIS. Once the names of teachers or school directors who have successfully undertaken the structured CPD activity are entered in the HRMIS and the information is validated at the relevant level, the CPD credits will appear in the individual teachers' or school directors' HRMIS profile (career passport). Where CPD credit information is entered in HRMIS at school or TEI/HEI level, DOE and POE will provide QA of the data entered: they will perform data verification and conduct spot checks of the documentation to ensure the validity of the information entered.

In parallel, on successfully completing all aspects of the CPD offering, including all assessments, the teacher or school director's physical career passport will be updated to show this information and stamped by the DOE, POE or CPDMO.

3) Credit attribution for self-directed CPD

When self-directed CPD is undertaken at the school, cluster or PLC level, the teacher's individual learning plan is agreed with their immediate supervisor. This is structured to include a given number of hours' input from an accredited self-directed CPD source, such as an accredited MOOC, given journal articles, given book chapters, etc. and a plan for a given number of hours of self-study or reflective practice, followed by preparation of an output to demonstrate the impact of the self-directed CPD. During their annual appraisal, the teacher or school director presents their portfolio of evidence that they have successfully accomplished their CPD plan, including evidence of impact (outputs and outcomes). If the appraisal result is positive, the appraiser confirms that the corresponding number of CPD credits have been earned and communicates this information to the DOE, POE or CPDMO, who captures this information in the HRMIS. The HRMIS already includes information on accredited sources for self-directed CPD, which have been judged to meet the benchmarks and requirements (and space for as yet unaccredited sources to be validated on an individual basis). Once the information is validated at the relevant level, the CPD credits will appear in the individual teacher's profile.

In parallel, following a successful appraisal, the teacher/school leader's physical career passport (CPD logbook) will be updated to show this information, signed by the supervisor and stamped. The career passport remains in the teacher/school leader's possession.

Attribution of CPD credits will be administered by the CPDMO, which will also accredit given CPD offerings and attribute credits to these, based on the CPD credit acquisition system. The CPD credit acquisition will be implemented in a phased manner, beginning with credit for structured CPD in 2020 and expanding to include self-directed CPD by 2025. Initially, CPD credits will be attributed to teachers and school directors participating in selected CPD activities provided by accredited CPD providers, including TEIs currently running TQU programmes (for example, PTEC) and DP projects providing INSET such as STEPCam, SEIP, SBM and USESDP-2. CPD activities under INSET programmes currently running will be credited retroactively.

An individual teacher who wishes to upgrade his or her qualification at a TEI/HEI may use his/her CPD credits for a credit transfer and is required to present evidence of meeting the credit requirements based on the target TEI/HEI's standards. A TEI/HEI conducting a TQU programme may verify the CPD credits based on the teacher's stamped career passport and/or electronic CPD records on the HRMIS, plus evidence of outcome/output collected by the teachers themselves, and allow transfer of CPD credits to a TQU programme upon successful verification.

2.6.1.3. Increasing teacher educators

To increase qualified teacher educators, to recruit high school teachers who hold MA degree would be one of the feasible options. MoEYS would need to increase the salary scale for attracting those to be TEC lecturers. Currently high school teachers are ranked as status A, lower secondary teachers are ranked as status B, and primary and pre-primary teachers are ranked as status C. Either of the three options are to be introduced:

Option I (long-term goal): To increase the basic salary of teacher with BA. E.g. primary and preprimary teachers should be increased as status B (from status C), lower secondary teachers should be increased as Status A (from status B).

Option II (mid-term goal): To increase the functional allowances of teachers with BA. E.g. BA qualified teachers would be started from the middle level (rank 6 out of 10), while teachers graduated from 12+2 are started from the low level (rank 1 out of 10).

Option III (alternative): To provide better opportunities to BA qualified teachers for promotion.

However, the strategy needs to go beyond qualifications and salary upgrading and to establish the profession of "teacher educator" as an attractive option within the education sector labour market, able to attract and retain candidates of quality. Use of quality standards, access to professional development and career progression, corresponding benefits and status are amongst the measures required.

2.6.1.4. Introduction of teacher licensing system

There are several ideas around licensing. One of the ideas is to give PRESET graduates an opportunity to take a national examination to get a teaching license/certificate to be used in all the provinces, as is often applied for medical doctors. Another idea is to provide teaching certificates for those who have successfully completed a PRESET programme in a HEI or a teacher training institution. In addition to this, a third option, used in many countries, is to have a National Teacher Council or similar professional body which licenses teachers who have demonstrated they meet the qualification and quality standards. This is an important step in establishing teaching as a profession, regulated by itself. In all these cases, the teacher candidates undergo a screening process (to include presentation of documents, including evidence of teaching performance, interview, and/or written exam) at the national or provincial level to earn their teaching license, which is a prerequisite to being appointed to a teaching position there.

The main difference between these two options above is the way of controlling the quality. The former calls for a strong leadership of the central government to establish national professional standards and ensure equitable teacher distribution. The latter gives larger discretion to provincial governments for teacher selection and deployment, which makes each province takes more responsibility for the quality and outcomes of education in the province and is required to maintain a high ethical standard to avoid misbehaviours in teacher selection process.

The current system in Cambodia is more like national licensing, although there are neither teaching certificates given to each teacher, nor the national standards based on which TTC final exams are carried out. MoEYS would introduce teacher licensing system gradually with the abovementioned two options. POE shall be the main organization in charge of providing such teaching certificates but need detailed plan how to register teaching certificates in good linkage with the accreditation system.

2.6.2. Mid-and long-term challenges

2.6.2.1. Constant supply of teacher educators and capacity development of TECs to implement upgrading programmes

Ideally, TEC is appropriate institute to provide upgrading programmes as they have developed the new 12+4 programmes curriculum and syllabi and implementing it into practice. However, TEC has severe shortages in teaching staff who meet required qualification (MA or PhD in pedagogical field and proficient skills in teaching and English). Currently TEC teaching staff are categorized into three, namely lecturer, associate lecturer, and assistant lecturer. The associate and assistant lecturers are encouraged to be lecturers through capacity development but it will take several years or more to increase enough number of lecturers who fulfilled the required skills. Therefore, MoEYS should continuously prioritize giving opportunities for TEC lecturers capacity development using various modalities associated with attractive conditions and professional development opportunities, including post-graduate programmes in country and abroad.

2.6.2.2. Need for the holistic teacher policy environment to support the TQU agenda

TQU needs to be undertaken within a holistic approach to the professionalization of teaching, which addresses the conditions for the social and professional status of teaching to be improved and appropriate communications to support this. This will include a package of measures and policies to improve the attractiveness of teaching as a profession and the quality of teachers, including the right and obligation to engage in continuous professional development opportunities, access to vertical and horizontal career progression opportunities, corresponding incremental reward, more accountability of teachers through regular appraisal, use of professional

standards, and other associated policies. The plan for TQU should interact seamlessly with the CPD and TCP systems being developed and implemented by the MoEYS; the initiatives support one another and their interaction is critical to addressing the question of teacher qualification in Cambodia.

Table 29 Action Plan for Teacher Qualification Upgrade (TQU) 2021-2025

	Timelin		20	21		2	02	2		202	23		20)24			20:	25		Indicators	Responsib		Supporti
Main Actions	е	1	2	3	4	1 2	2 3	4	1	2	3 4	l 1	1 2	3	4	1	2	3	4	(Tentative proposal)	le Unit	Budget	ng DPs
trategy 1: Enhancing t		_				12-	+4	tea	che	rs t	hro	ug	h T	EC	5								
Increase the admissi	ion quota f	or	2 1	EC	S						_	_	_										
1.1. Gradually increase the number of TEC students up to 500 and 300 for primary and lower secondary respectively	2021-20																			- Number of admitted TEC 12+4 students (Pri and LS) by year	TTD		
1.2. Gradually suspend the 12+2 courses in TECs	2021-20																			- Number of admitted TEC 12+2 students by year	TTD		
1.3. Intensively recruit qualified teaching staff for TECs	2021-20																			- Number of rectruitment (qualified TEC 12+4 teaching staff) by year - Ratio of qualified teaching staff to total teaching staff for 12+4 program by year	TTD		
1.4. Prepare and implement a 12+4 distance learning course	2021-20																			- 12+4 distance learning course materials	TEC (lead) supported by RUPP and NIE		
1.4.1. Select satellite TTCs and qualified TTC trainers	2021																			- Selection results of satellite TTCs - Selection results of qualified TTC trainers	TTD		
1.4.2. Develop a distance learning course	2022																			- Eight distance learning labs are installed - Ccurriculum framework for distance learning is designed - Course syllabi for distance learning are developed - Teaching and learning materials for distance learning are prepared - Application for distance learning are developed	TEC (lead) supported by RUPP and NIE	\$ 687,900.0 0	
1.4.3. Give training to trainers in charge of the distance course	2022																			- 50 lecturers (ToT) for distance learning are trained	TEC (lead), TTD	\$ 140,000.0 0	

Main Actions	Timelin		20	21		2022					2	02	3		2	20	24			20	25	5	Indicators	Responsib	Budget	Support
Iviain Actions	е	1	2	3	4	1	2	3	4	1	:	2 :	3 4	4	1	2	3	4	1	2	3	4	(Tentative proposal)	le Unit	Buaget	ng DPs
1.4.4. Start the distance learning course	2023-																						- 11 specialized Distance learning courses (25 student teachers for each specialized) are implemented with addionally recruitment new studens for 3 years - Practicum of student teachers in distance learning program are assessed and reported - Monitoring report or assessment results of the distance learning course implementation is prepared	TEC (lead),	\$ 1,848,600. 00	
Increase the number	of TECs																							MoEYS		
2.1. Set clear criteria for the next TECs and select potential TTCs	2022																						- Criteria for opening next TECs - Selection results of TTCs	TEC (lead),		
2.2. Revise the TTC curriculum to align with the TEC curriculum standards	2023																						- Revised TTC curriculum alighed with TEC curriculum	TEC (lead), TTD		
2.3. Prepare the above TTCs to become TECs	2023-20																						- Plan of renovatoin or equipment procurement - Plan of recruiting qualified management and teaching staff	TTD		
2.3.1. Officially establish new TECs by Sub-decree	2023																						- Sub-decree of establighing new TECs	TTD		
2.3.2. Select, appoint, and train the management staff of the new TECs	2023-20 24																						- Selection criteria, results, and appointment of management staff - Training program of management staff, number of trained management staff - TEC management documents (as output of the training program)	TTD		
2.3.3. Recruit/ select and train the teaching staff of the new TECs	2024-20 25																						- Selection criteria, selection results, and appointment of teaching staff - Number of training to the new staff	TEC, TTD, POE		
2.3.4. Develop infrastructure and prepare equipment for the new TECs	2024-20 25																						- Construction/ renovation of the new TECs - Equipment list of TECs	TTD, Planning Division, POE	Approx. \$30 mil for 2 TECs	
2.4. Start 12+4 PRESET in new TECs	2025-																						- Number of program implemented - Updated database of trained teachers - Monitoring report or assessment results of the new 12+4 program	TEC, TTD, POE		

		Timelin		20	21			20	22			20:	23			20	24			20	25		Indicators	Responsib		Supporti
	Main Actions	е	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	(Tentative proposal)	le Unit	Budget	ng DPs
	1.1. Design and conduct survey and analyse the needs of BA+1	2021																					- Concept note of the needs survey or survey plan - Needs survey report	TTD		
	1.2. Select the target provinces for BA+1	2021																					- Selection criteria and results - Number of target provinces and teachers to be trained	TTD		
2	Implement BA+1																									
	2.1. Select a BA+1 provider (NIE or TECs) and set a quota for pilot BA+1	2021																					- Capacity assessment of provider (NIE or TECs)	TTD		
	2.2. Develop a BA+1 programme to align with the TEC curriculum standards	2022																					- BA+1 programme alighed with TEC curriculum standards	NIE (lead) suppoered by TEC/ RUPP		
	2.3. Implement BA+1 on a pilot basis	2022-																					- Updated database of trained teachers - Monitoring report or assessment results of the BA+1 program implementation - Number of trained teachers	NIE (lead) suppoered by TEC/ RUPP		
St	rategy 3: Establishing	a mechan	isn	n to	o u	pg	rac	de	qu	ali	fica	tio	n t	hr	oug	gh	the	e lo	ong	р	rog	gra	imme			
1	Develop the long programmes																									
	1.1. Prepare a set of modules for the 60-credit programmes in reference to Prakas 1870 and using the existing TEC course materials	2021																					- Modules of the 60 credit programmes	RUPP (lead) NIE, TEC, TTD		
	1.2. Develop detailed plans for Fixed and Open programmes, including such information as: the target group, the number of participants, implementing institutions, the mode of delivery, selection criteria and procedure, implementation timeline, etc.	2021																					- Detailed plans for fixed and open programes	RUPP (lead) NIE, TEC, TTD		
	1.3. Prepare a budget plan and mobilize financial support from DPs	2021-22																					- Budget plan by programmes - Financial proposals to get DPs fund	RUPP (lead) NIE, TEC, TTD		Partially GEIP/SEIP for LS
	1.4. Prepare teacher educators and training materials	2022																					- Training materals for teacher educators	RUPP (lead) NIE, TEC, TTD		Partially GEIP/SEIP for LS
2	· · · · · ·																									
	2.1. Select the training participants	2022																					- Criteria for selecting training participants - List of training participants	TTD, POE		

		Timelin		20)21			202	22		2	023	3		20	24			202	25		Indicators	Responsib		Supporti
	Main Actions	е	1	2	3	4	1	2	3	4	1 2	2 3	4	1	2	3	4	1	2	3	4	(Tentative proposal)	le Unit	Budget	ng DPs
	2.2. Start implementing the long programmes	2022-																				- Updated database of trained teachers - Monitoring report or assessment results of the short program implementation	NIE, TEC, RUPP	\$25,515,0 00.00	(the budget covers primary+L S)
3	Start implementing Open programmes	2022-																				- Updated database of trained teachers - Monitoring report or assessment results of the open program implementation	NIE, TEC, RUPP TTD		
St	rategy 4: Promoting	12+2 teach	hei	rs v	vith	В	A to	р	art	tici	pat	e in	the	e sh	101	rt p	rog	gra	mr	ne					
1	Develop the long pr	ogrammes	5																						
	1.1. Prepare a set of modules for the 30- credit programmes in reference to Prakas 1870 and using the existing TEC course materials	2021																				- Modules of the 30 credit programmes	RUPP (lead) NIE, RUPP, TTD		
	1.2. Develop a detailed plan, including such information as: the number of participants, implementing institutions, the mode of delivery, selection criteria and procedure, implementation timeline, etc.	2021																				- Detailed plan for long programmes	RUPP (lead) NIE, RUPP, TTD		
	1.3. Prepare a budget plan and mobilize financial support from DPs	2021-22																				- Budget plan by programmes - Financial proposals to get DPs funt	RUPP (lead) NIE, RUPP, TTD		
	1.4. Prepare teacher educators and training materials	2022																				- Training materials	RUPP (lead) NIE, RUPP, TTD		
2	Implement short pro	grammes	-	-								_	-						-						
	2.1. Select the training participants.	2022																				- Criteria for selecting training participants - List of training participants	TTD, POE		
	2.2. Start implementing the short programmes	2022-																				- Updated database of trained teachers - Monitoring report or assessment results of the short program implementation	NIE, TEC, RUPP	\$18,285,7 50.00	(the budget covers primary+L S)

References

- BernardJean-Marc, TiyabKB, VianouK. "Profils enseignants et qualité de l'éducation primaire en Afrique subsaharienne francophone." Dakar: CONFEMEN, 2004.
- Darling-Hammond Linda. "Teacher education around the world: What can we learn from international practice?" Routledge, 2017, Vol. 40, NO. 3, 291–309.
- Fasli JalalSamani, Mae Chu Chang, Ritchie Stevenson, Andrew B Ragatz, Siwage D NegaraMuchlas. "Teacher Certification in Indonesia: A Strategy for Teacher Quality Improvement." 2009. https://pdfs.semanticscholar.org/df3d/2786622e159d2bd7b9598b4610fbebdd0ca3.pdf.
- Global Partnership for Education (GPE). "Improving Teaching and Learning: The knowledge and Innovation Exchanging (KIX) Discussion Paper." 2019.
- https://www.globalpartnership.org/sites/default/files/2019-07-kix-tl-final-english.pdf.
- Global Partnership for Education "Results Report 2019." 2019.
- https://www.globalpartnership.org/content/results-report-2019.
- Ingvarson, L. "Development of a National Standards Framework for the Teaching Profession." 2002.
- https://research.acer.edu.au/cgi/viewcontent.cgi?article=1007&context=teaching_standards Ingersoll M.Richard. "A Comparative Study of Teacher Preparation and Qualifications in Six Nations." 2007. https://files.eric.ed.gov/fulltext/ED498318.pdf.
- International Reading Association. "Status of Teacher Education in the Asia-Pacific Region." UNESCO, 2008.
- Jawawi, R. et al. "Teacher education in Brunei Darussalam: Transforming tomorrow's generation through teacher education today." 2014. http://digilib.uin-suka.ac.id/19316/1/01.%20ROSMAWIJAH%20JAWAWI,%20DKK%20-%20TEACHER%20EDUCATION%20IN%20BRUNEI%20DARUSSALAM%20TRANSFORMING %20TOMORROWS%20GENERATION%20THROUGH%20TEACHER%20EDUCATION%20TODAY.pdf
- JICA. "Report of Basic Study for Project for Improving Teaching and Learning Mathematics for Primary Education in Laos." 2015.
- MoEYS. "Education Statistics and Indicators 2019-2020." Cambodia: Ministry of Education, Youth and Sport, 2020.
- MoEYS. "Education Strategic Plan 2014-2018." Cambodia: Ministry of Education, Youth and Sport, 2014
- MoEYS. "Education Strategic Plan 2019-2023." Cambodia: Ministry of Education, Youth and Sport, 2019.
- MoEYS. "Teacher Policy." Cambodia: Ministry of Education, Youth and Sport, 2013.
- MoEYS. "Teacher Policy Action Plan." Cambodia: Ministry of Education, Youth and Sport, 2015.
- MoyleKathryn. "Global Trends in Higher Education Policies." 2015.
- https://research.acer.edu.au/cgi/viewcontent.cgi?article=1016&context=teacher_education.
- Musset P. "Initial Teacher Education and Continuing Training Policies in a Comparative Perspective: Current Practices in OECD Countries and a Literature Review on Potential Effects." OECD Education Working Papers No.48, 2010.
- Naron Chuon Hang. "Moving Toward Digital Education." Power point handout, 2019.
- Nguyen T.H. "Teacher Training in Vietnam." 2008. http://www.hurights.or.jp/pub/hreas/.
- Nomura, J. et al. "Teacher Education Curriculum: A Comparative Study across Asia and ASEAN." 2019. http://twincle.e.chiba-u.jp/jpn/news/2019/02/20190215.pdf.
- OECD. "Teachers Matter: Attracting, Developing, and Retaining Effective Teachers." OECD, 2005.
- OECD. "21st Century Skills and Competences for New Millennium Learners in OECD Countries." OECD, 2009.
- OECD. "Building a Teaching Profession: Lessons from around the World." 2011.
- https://files.eric.ed.gov/fulltext/ED518775.pdf.

- OECD/UNESCO. "Education in Thailand: An OECD-UNESCO Perspective, Reviews of National Policies for Education." OECD Publishing, Paris, 2016.
- OECD. "Education Policy Outlook 2015: Making Reforms Happen." OECD Publishing, 2015.
- OECD. "Teaching in Focus No.11: Supporting New Teachers." 2015.
- OECD. "The Future of Education and Skills: Education 2030." 2018.
- https://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf.
- http://dx.doi.org/10.1787/9789264259119-en
- UNESCO. "EFA Global Monitoring Report 2003/4: Quality Imperative." 2004.
- https://unesdoc.unesco.org/ark:/48223/pf0000137333.
- UNESCO. "Handbook on Education Policy Analysis and Programming. Vol.1., Education Policy Analysis." 2013.
- https://unesdoc.unesco.org/ark:/48223/pf0000221189.
- UNESCO. "EFA Global Monitoring Report 2013/4: Teaching and Learning: Achieving Quality for All." 2014. https://unesdoc.unesco.org/ark:/48223/pf0000225660.
- UNESCO. "Education Systems in ASEAN+6 Countries: A Comparative Analysis of Selected Educational Issues (Discussion Document No.5)." 2015.
- UNESCO Institute for Statistics (UIS). "Teachers and Educational Quality: Monitoring Global Needs for 2015." 2006. http://uis.unesco.org/sites/default/files/documents/teachers-and-educational-quality-monitoring-global-needs-for-2015-en_0.pdf.
- Wang, A. Coleman, et al. "Preparing Teachers Around the World". Educational Testing Service. 2003.
- https://www.ets.org/Media/Research/pdf/PICPRETEACH.pdf
- World Bank. Secondary Education in Africa: At the Cross Roads: Choices for Secondary Education and Training in Sub-Saharan Africa. Washington D.C.: SEIA and the World Bank, 2007.
- World Bank. "SABER-Teachers: Objectives, Rationale, Methodological Approach, and Products." 2011.
- http://siteresources.worldbank.org/EDUCATION/Resources/ 278200-1290520949227/7575842-1290520985992/SABER-Teachers_Framework.pdf.
- World Bank. "What Matters Most for Teacher Policies: A Framework Paper. SABER Working Paper Series." 2013.
- http://documents.worldbank.org/curated/en/503591468331856077/pdf/901820NWP0no4000Box385307B00PUBLIC0.pdf.
- World Bank. "Educating the Next Generation: Improving Teacher Quality in Cambodia." Phnom Penh: The World Bank, 2014.
- World Bank. "Indonesia: Teacher Certification and Beyond An empirical evaluation of the teacher certification program and education quality improvements in Indonesia." World Bank, 2015.
- JICA E-TEC. "Teacher Education Subsector Analysis Report: For the strategic upgrade of basic teacher qualifications to the degree level." 2019.
- MoEYS." Education Congress, The Education, Youth and Sport Performance in the Academic Year 2015-2016." 2017.
- MoEYS. "Education Congress, The Education, Youth and Sport Performance in the Academic Year 2014-2015." 2016.
- MoEYS. "Teacher Policy Action Plan." 2015.
- MoEYS," Curriculum Framework of General Education and Technical Education." 2015.
- MoEYS. "Directive on Standard of the Usage of Educational Personnel, No. 33." 2014.
- MoEYS. "Education Statistics and Indicators 2015-2016." Cambodia: Ministry of Education, Youth and Sport, 2016.
- MoEYS. "Education Statistics and Indicators 2016-2017." Cambodia: Ministry of Education, Youth and Sport, 2017.
- MoEYS. "Education Statistics and Indicators 2017-2018." Cambodia: Ministry of Education, Youth and Sport, 2018.

- MoEYS. "Education Statistics and Indicators 2018-2019." Cambodia: Ministry of Education, Youth and Sport, 2019.
- MoEYS. "Education Statistics and Indicators 2019-2020." Cambodia: Ministry of Education, Youth and Sport, 2020.
- MoEYS. "Education Strategic Plan 2014-2018." 2014.
- MoEYS. "Education Statistics and Indicators 2014-2015." Cambodia: Ministry of Education, Youth and Sport, 2015.
- National Institute of Statistics, Ministry of Planning. "General Population Census of Cambodia 2008." 2011.
- National Institute of Statistics, Ministry of Planning. "Population Projection of Cambodia 2013-2023." 2017.
- World Bank. "Cambodia in the time or COVID-19: Special Focus Teacher Accountability and Student Learning Outcomes". 2020.