CAPACITY DEVELOPMENT PLAN FOR TEACHER EDUCATORS

STRENGTHENING PRE-SERVICE TEACHER EDUCATION IN MYANMAR (STEM)
UNESCO, AUGUST 2016











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ACRONYMS

4YD Four Year Degree course

ATE Association of Teaching English
ATEO Assistant Township Education Officer

CDP Capacity Development Plan

CD-ROM Compact Disc – Read Only Memory
CSHE Centre for the Study of Higher Education

DHE Department of Higher Education

DTET Department of Teacher Education and Training

EC Education College
EC European Commission

EfECT English for Education College Trainers

EIA English in Action Bangladesh

EU European Union

ICT Information Communication Technology

MoE Ministry of Education

MOOC Massively Open Online Course

STEM Strengthening Pre-Service Teacher Education in Myanmar project

TCSF Teacher Competency and Standards Framework

TE Teacher Educator

TECSF Teacher Educator Competency and Standards Framework

TERC Teacher Educator Resources Centre

TEO Township Education Office UoM University of Melbourne

UNESCO United Nations Education, Scientific and Cultural Organisation

USB Universal Serial Bus

ACKNOWLEDGEMENTS

The UNESCO Strengthening Pre-Service Teacher Education in Myanmar (STEM) project, funded by the Australian Government, supports the Ministry of Education (MoE) in improving the quality of teachers and teaching in Myanmar.

Under the STEM project, Montrose, a British international development consultancy company, was contracted between September 2015 and August 2016 to:

- (i) review the existing teacher training curriculum in use at Myanmar's Education Colleges (ECs),
- (ii) research and design a new EC Curriculum Framework to be based on in-country research and international best practice, and
- (iii) produce a Capacity Development Plan (CDP) to propose how the teaching staff at ECs, the teacher educators (TEs), should be trained to deliver a new competency-based curriculum.

This document is the culmination of the third stage, which was carried out between May and July 2016 by a Montrose team of dedicated national and international education experts engaging with ECs through the following activities:

- A needs assessment of teacher educators' current skills was carried out in four ECs in May 2016 – Bogalay, Yankin, Lashio, and Mawlamyine. The needs assessment included in-depth interviews with EC principals, vice principals and heads of department, focus group discussions with EC staff, and classroom observations.
- A workshop to trial proposed components of the draft Curriculum Framework was held in Mandalay in early July 2016, attended by EC staff from across upper Myanmar. This workshop explored the draft curriculum and EC staff's understanding of new concepts proposed.
- 3. A second workshop to trial teacher professional development needs and techniques was held in Yangon in late July 2016, attended by EC staff from across lower Myanmar. This workshop looked further into the understanding of, and ability to implement, skill sets identified as essential to be able to deliver the proposed curriculum.

We thank all the EC staff and teacher educators involved in the activities for your support and cooperation. Special acknowledgement is given to the Principal, Vice Principal, Heads of Department, and teacher educators at Bogalay, Lashio, Mawlamyine, Pyay, Thingangyun, and Yankin ECs, who received official visits as part of the overall four stage research process between October 2015 and June 2016. In addition, special acknowledgement is also given to senior MoE Department of Teacher Education and Training (DTET) staff, including the Director General, Directors, and Deputy Directors, who participated in the process and helped to drive it forward.

All 22 ECs (as of early 2016) in Myanmar participated in the development of the CDP, including participating in the consultation workshops, donating their valuable time and expertise to share information and knowledge regarding the current state of teacher education and their ideas for how it should look in the future. The CDP would not have been possible without their invaluable input.

The Montrose consultancy team included: needs assessment research and data collection in Myanmar was carried out by Emily Stenning, Daw Ohnmar Tin, and Dr Thein Lwin, with workshops

being designed and led by international teacher training experts Lyn Bowers and George Kelly. Remote curriculum development expertise was provided by Juliet Cowley, and extensive in-house research, data analysis, translation and report writing support was provided by Htet Thiri Aung, Jessica Heron, Jane Sail, and Nicholas Ramsden. The team was provided with significant assistance from the UNESCO Myanmar STEM project staff, including Dr Dagny Fosen, Ms Jamie Vinson, Ma Sandar Kyaw, and Ma Kalayar Than.

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1. EXECUTIVE SUMMARY

1.1 Introduction and sequencing of the STEM Capacity Development Plan formulation

The Government of the Republic of the Union of Myanmar has decided to introduce an all-graduate teaching profession. The current two-year diploma for Primary and Middle school teachers will be converted to a four-year degree (4YD), to be taught at Education Colleges (EC) by Teacher Educators (TEs).

The United Nations Educational, Scientific and Cultural Organisation (UNESCO), under the Strengthening Pre-Service Teacher Education in Myanmar (STEM) project, has supported the development of a draft EC Curriculum Framework for the 4YD. The draft EC Curriculum Framework provides the direction and structure for how to improve teacher education in order to ensure new teachers can effectively improve the learning outcomes in their classrooms. It recommends revising the methodology in ECs to a more 'constructivist approach' to learning. This is an approach where the teacher educator provides a framework within which the student teachers can discover and construct their own knowledge of how and what to teach. It is a learner-centred approach rather than the teacher/textbook centred approach that has been observed to be the dominant style of teaching in the ECs throughout research visits. There is a key emphasis of practical learning within the draft EC Curriculum Framework. A significant proportion of instructional time is spent practicing how to prepare, deliver, and then reflect on lessons given both in a simulated classroom environment in the ECs and in real classrooms.

Key aspects of the proposed draft EC Curriculum Framework are as follows:

Proposed Curriculum Module	Key aspects proposed which improve on the current curriculum	
Educational Studies	 Move to a 'competency-based' rather than 'content-based' curriculum – address the ability to teach rather than just being knowledgeable of teaching. Reflect the Teacher Competency Standards Framework (TCSF). 	
Curriculum and Pedagogical Studies	 An integrated approach wherein the underlying educational theory and knowledge required is learned through practicing real teaching and applying concepts in the classroom. Academic subjects taught in conjunction with how they need to be taught in either primary or middle school. 	
Practicum	 Extended from the current curriculum. Monitored and supported to contribute to learning from feedback and practice. 	
Core Skills	Communication, use of language, additional English, and ICT added as new core skills.	
Self-study and Reflection	 Ensuring time for investigation and self-study, especially online as connectivity improves. Ensuring time for reflection on topics covered and practiced, both in ECs and during practicum in schools. 	

This Capacity Development Plan (CDP) provides the MoE with information needed to plan the capacity development TEs that will need in order to effectively implement the draft EC Curriculum Framework. It outlines TE skill gaps identified by assessment reports supported by UNESCO to date,¹

¹ UNESCO (2014) Synthesis Report on Selected Education Colleges in Myanmar; analysis of D.Ted textbooks (unpublished); Atkins. S et al. Assessment of Pedagogical Practice and Practical Teaching Experiences in

the types of professional development modules required to up-skill TEs, and an analysis of operationalisation options for how these modules can be delivered.

This CDP has been informed by extensive consultations with ECs including (i) TE needs assessment research in Bogalay, Lashio, Mawlamyine, and Yankin ECs, (ii) a curriculum content trialling workshop for EC staff from Upper Myanmar in Mandalay, (iii) a teacher professional development trialling workshop for EC staff from lower Myanmar in Yangon, and (iv) further consultations with EC staff, representatives of the Myanmar Ministry of Education (MoE), Department of Teacher Education and Training (DTET), and UNESCO staff to arrive at the current CDP recommendations. It is the third key document under the STEM project's curriculum development support, and should be read in conjunction with the previous two documents as a set of three as follows:

- 1. Education College Curriculum Review²
- 2. Education College Curriculum Framework ³
- 3. Education College Capacity Development Plan (this report)

This CDP makes a number of assumptions regarding the managerial and operational aspects of training needs of teacher educators. These include the assumption that:

- As announced by the MoE at the Teacher Education Seminar on 4-5 August 2016, the 'ladder system' of teacher promotion will be abolished and a new teacher pay and management system will be introduced that will incentivise the continuous professional development of TEs:
- Aspects of EC and training operationalisation and management will be addressed, including a
 required increase in EC facilities and staff, available school placements for increased
 practicum, quality assurance of training and practicum by EC principals, ICT and internet
 availability in ECs, funding for the new system, and adequate support networks for trainee
 teachers.

The findings and recommendations of this CDP are summarised as follows:

1.2 Key TE skills required to deliver the draft 4YD curriculum

Key changes proposed in the draft Curriculum Framework	Skills required by TEs to deliver the draft Curriculum Framework		
Move to competency-based, practical focus	 Modelling methodology to enable active participation of students Modelling methodology that encourages critical thinking through meaningful questioning and answers Modelling methodology to meet the various needs of different students Deconstructing knowledge to provide rounded explanations of 		
	 subject content Constructive feedback on lesson observations Self-reflective practice Formative assessments 		

Myanmar's Education Colleges, UNESCO, Myanmar.

² UNESCO (2016), *Education College Curriculum Review,* Strengthening Pre-service Teacher Education in Myanmar (STEM) Programme, UNESCO, Myanmar

³ UNESCO (2016), *Education College Curriculum Framework*, Strengthening Pre-service Teacher Education in Myanmar (STEM) Programme, UNESCO, Myanmar

	Developing teaching learning materials	
	Mentoring skills for proposed extended practicum period	
	Teacher observation skills	
Move to specialisation in either	Age-appropriate pedagogical content knowledge	
Primary or Middle school teaching by	Age-appropriate teaching methods	
teachers	Early literacy and numeracy instruction	
	Literacy Recovery ⁴	
	Subject specialisations (middle school teachers)	
Closer alignment to the Basic	Subject material development	
Education curriculum content	Curriculum development skills	
	Teaching in other languages	
	Skilfully using and teaching ICT	
	Multi-grade teaching skills	
Addition of another two years of	Adult-appropriate learning styles (as the student teachers will	
learning to attain degree level	be more mature by the end of their two-year course)	
	More autonomy in learning, including skill sets such as:	
	 Self-directed learning 	
	 Action research 	
Teaching ICT in the classroom	Rounded ICT skills	
	ICT knowledge and classroom delivery skills	

1.3 Skills gaps revealed through the skills audit

Looking at the skills required above, the following are priority areas that will need addressing through new professional development modules:

1. Empowering TEs to become agents of change

The pedagogical principles behind the draft Curriculum Framework are new to the large majority of TEs. Therefore, the TEs will require a deep conceptual understanding and ownership of the principles outlined in the Framework⁵ in order for them to be the agents of change required for rolling out an upgraded competency-based EC curriculum successfully. Lecture- and textbook-based teaching styles need to be largely replaced with a constructivist and integrated approach that requires TEs to develop competencies (a combination of content knowledge, skills and attitude) rather than simply content knowledge, which is the current emphasis of teacher training. The research has shown that the concepts behind a 'competency-based' curriculum are still relatively new to TEs. Therefore, it is a priority to allow sufficient time throughout the TE's capacity development to properly grasp an understanding of the different concepts put forth in the Curriculum Framework. A grounded understanding of the new concepts will be necessary in order for TEs to adopt the new way of thinking as well as feeling the sense of ownership that will be required for them to successfully deliver the new competency-based curriculum. The need for this comprehensive understanding and ownership from TEs cannot be emphasised enough as the foundation of successful teacher training in Myanmar going forward.

2. Comprehensive training in all skill areas

The research shows that whilst TEs feel more confident in some skill areas than others, further practice in <u>all</u> required skill areas is needed. The skill areas highlighted are as follows:

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⁴ See Module 6b, Page 24 for explanation of literacy recovery

⁵ Education College Curriculum Framework, p. 49.

- Constructive feedback on lesson observation
- Enabling active participation
- Enabling reflective practice
- Encouraging questions
- Answering questions
- Carrying out research projects
- Developing teaching-learning materials
- Adapting lessons for different learners
- Age-appropriate teaching techniques
- Use of formative assessment
- Being good at communicating
- Using ICT

The training required to up-skill TEs will therefore need to comprehensively cover all these required skill areas.

3. Building competence and confidence: practical training

Both confidence and competence in what to deliver are required by TEs. The research showed that many teacher educators appear confident in their understanding of what is needed, however, when observed practicing new techniques it was evident that they need to develop competencies further. This was observed during the needs assessment and in the workshops. Respondents in the workshops requested more training despite stating that they understood new concepts. Practical teaching of new concepts to reinforce understanding through the 'Learn, Apply, Reflect' model will be important in TE up-skilling to further reinforce the above.

4. New skill areas

Two key skill areas that are present in the current curriculum but are not yet fully developed amongst TEs are conducting research projects and ICT usage. As both these areas are further emphasised in the new Curriculum Framework, they will require extra attention during TE up-skilling.

5. Embedding teacher competency standards in teacher education

TEs need a comprehensive understanding of the new TCSF⁶, and that their training of new student teachers is ultimately aimed at ensuring that all new teachers meet these standards, and sustain them in the future. A 'Teacher Educator Competency Standards Framework' (TECSF) should also be developed and informed by the TCSF in order to provide an immediate benchmark and assessment tool for TE quality and up-skilling.

6. Specialisation tracks

TEs will need to start differentiating primary school teachers from middle school teachers through recognition of their different skills sets as opposed to just their promotion levels. Ways in which to teach students of different ages, especially early grade literacy and numeracy teaching techniques for lower primary teachers, will need to be introduced. The research showed that many TEs still believe primary teaching to be lower status than middle and high school teaching, a prevailing attitude that will need to be addressed by TEs and the MoE more generally for the proposed reforms to be successful.

7. Curriculum development

⁶ Myanmar Teacher Competency Standards Framework 2016 (draft)

The Basic Education Curriculum which student teachers are being taught to teach by TEs is currently under reform. The most recent framework (approved May 2015) proposes timetabled periods on 'local curriculum' – content to be developed at State/Regional level. Consequently, curriculum development will become a new skill needed within the ECs.

8. Ensuring quality of Teacher Educators – academic subjects

EC staff that lecture in academic subject content do not at present have a qualification in the methodology of how to teach, nor do they need to have teaching experience. This will need to be addressed.

1.4 Recommended TE professional development modules required

In order to address these key skill gap areas, the following seven TE professional development modules are recommended as a 'Phase 1' of the TE up-skilling process:

Module 1: Professional Orientation - understanding and teaching the new EC Curriculum

- Understanding the new teacher education curriculum
- Understanding the current Basic Education curriculum
- Teacher Competency Standards Framework
- Performance indicators
- Assessment
- Integrated curricula
- Student-centred learning
- Changes in EC teaching methods

Module 2: Effective Training of Adults

- Adult learning techniques
- Training versus teaching
- · Self-motivation and self-directed learning

Module 3: Effective Teaching Practice

- Deconstructing knowledge into basic concepts
- Enabling active participation to support learning outcomes
- Developing relevant teaching-learning materials
- Adapting lesson delivery to specific scenarios
- Adapting lesson delivery to different learners
- Creating environments that encourage questioning
- Managing classrooms
- Self-reflection on their own practice
- Reflection and dialogue
- Research methodologies

Module 4: Effective Student Observation and Assessment

- Simulating classroom environments and facilitating micro-teaching
- Lesson observations: developing lesson observation checklists
- Assessing student teachers' practice against competency standards
- Providing constructive feedback to student teachers
- Preparing for practicum
- Mentoring student teachers

Module 5: Effective Curriculum and Material Development

- Understanding the Basic Education Curriculum and proposed changes
- Curriculum development: basic framework
- Subject material development: basic design skills and design processes

Module 6: Demonstrating age-appropriate pedagogies

- a) Effective Primary school teaching
- b) Effective Middle school teaching
 - Explain the reasons for different approaches for different age groups
 - How to successfully teach different age ranges
 - Managing problems in the classroom relevant to age context

Module 7: ICT Proficiency

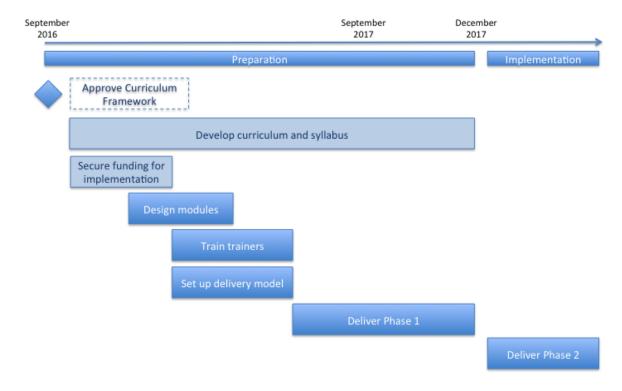
- Navigating the internet
- Online learning
- Mobile learning

Additional Module - training the trainers of TEs

Those that will deliver the above modules will themselves need comprehensive training

1.5 Recommended module delivery options

If the new EC Curriculum commences in December 2017, it leaves just over one year (2016-2017) as the 'Preparation Year', during which rapid up-skilling of TEs will be required. A skilled cohort of TEs is the key to enabling ECs to begin delivery of the new EC Curriculum from December 2017. The time constraint faced is illustrated in this diagram:



Due to this time constraint and the number of stages required for agreement upon, design and development of, training of trainers in, and then eventual roll-out of the above proposed modules,

this CDP recommends a 'three batch' approach to initial Phase 1 roll-out as follows, which may lead to Phase 1 carrying over in 2018 depending on available resources:

- Batch 1: Pilot in four ECs
- Batch 2: Scale up in ten ECs
- Batch 3: Scale up in remaining ECs

A 'Phase 2' would then continue to use the recommended modules for in-service continuous upskilling from 2018 onwards as shown in the diagram above.

The following options for delivery of the modules are suggested, following a comprehensive analysis of international practice in this area detailed in Section 5.2 and Annex 1. International practice shows that TE training and continuous professional development, when not a formal university degree, is often informal and based on professional networks and self-regulating standards. In Myanmar's case, a combination of hands-on training and exposure to new ideas initially, followed up by the establishment of a professional regulating body and self-imposed standards are seen as the most likely way forward.

Option 1: Establishment of a Teacher Educator Resources Centre (TERC)

- A centralised TERC could be established in the premises of an existing EC that is well
 furnished and equipped with ICT, ensuring on-going dialogue with an operational EC to aid in
 maintaining the TERC's grounded understanding of the needs of TEs, as well as providing the
 added benefit of shared resources between the two buildings.
- TERC staffing levels would be low but highly professional.
- The function of TERC would be to design training programmes and materials for use in ECs, ideally through a 'Training Quality Circle' structure, following the seven proposed modules above. These would include both electronic and hard copy materials to be disseminated to ECs either via the Internet if connectivity is of a suitable quality, or physically by CD-ROM, USB stick, or other means.
- Every EC would appoint a Curriculum Coordinator who would be trained in delivery of the seven modules and who would liaise with the TERC to receive materials and training support for rolling out the modules in their ECs.
- The TERC would therefore support flexible delivery of modules in all ECs remotely, whilst
 providing a hub for materials development, more hands-on training, and a focal point for
 development of a Community of Practice and perhaps, in time, a professional regulating
 body.

Option 2: College-based teacher educator training

- A higher cost option would be to place trainers in all ECs, in a similar way to the British Council's EfECT Programme English language trainers.
- Trainers would deliver all seven proposed modules in their ECs, and provide on-going handson support to TEs and student teachers.
- Design of training materials following the seven proposed modules would need to be done
 centrally by a curriculum working group supported by technical assistance. Materials could
 include electronic and hard copy materials that could be disseminated to ECs either via the
 internet if connectivity is of a suitable quality or physically by CD, introduced by the EC
 Trainer, and utilised in study groups set up in each EC.
- These study groups will be managed by a college 4YD Coordinator.
- A variation on this option is a slightly lower cost option whereby EC Trainers would cover a cluster of ECs rather than having one individual trainer per EC. Methodology would be similar, but ECs would need to appoint Teacher Educator Professional Development

Coordinators as in Option 1 to guide study groups and self-learning in between visits by the EC Trainer.

Option 3: Blended Learning – RECOMMENDED

- This CDP recommends an option that blends the different approaches in order to benefit from all available resources and techniques.
- The 'blended learning' approach is where the 'content' component of the professional development modules is delivered through a package of self-study materials including 'online' and 'offline' activities, such as printed reading materials, videos and electronic exercises on a CD, and internet hyperlinks, and then put into practice in study groups within the ECs, guided by visiting Trainers who cover clusters of ECs.
- A TERC could be set up as the hub of materials development and as an emerging professional regulating body.
- Materials developed by the TERC would be used by mobile trainers visiting each EC, but could also then be used independently by TEs during self-study. Material can therefore be delivered through a scalable learning package without the practical element of the personal development being lost.
- Assessment of the learning outcomes would include some online assessments, but the majority would be through demonstrations of competencies in the study groups.
- As internet connectivity improves and smart phones enable greater access to the web, TEs
 would have the opportunity to do their own research on the internet to locate the most
 relevant items for the modules, and add to the body of materials available for Myanmar
 teacher education.

2 THE CDP DEVELOPMENT PROCESS

The Government of the Republic of the Union of Myanmar intends to raise the standard of Myanmar's Basic Education system by ensuring that schoolteachers are better qualified. In line with best practice in other parts of the world, they intend to change the current system of teacher education for primary and middle school teachers from a two-year diploma to a four-year degree⁷. The MoE has proposed a new four-year degree (4YD) that will be introduced in the course of the next approximately two years. This will result in a graduate-only profession, upgrading the status of primary and middle school teachers to that of a high school teacher. To date in Myanmar, there has been a ladder system where new teachers start their teaching careers in primary school and get promoted up through the education levels. Currently, the Education Colleges (ECs) deliver diplomalevel training for graduates to become primary school teachers, and the Universities of Education deliver degree level training for entry into high school teaching⁸.

This Capacity Development Plan (CDP) is part of a longer-term consultancy carried out by Montrose looking at curriculum reform in Education Colleges in Myanmar, and is undertaken as one component of UNESCO's 'Strengthening Pre-service Teacher Education in Myanmar' (STEM) project. The overall objective of STEM is to improve the pre-service teacher education system through policy and institutional capacity development. STEM work has included developing a framework for ICT development in Education Colleges, an assessment of pedagogical practice and practical teaching experiences in ECs, a new Teacher Competency and Standards Framework (TCSF), and a review of EC management.

The CDP is the final part of the aforesaid Montrose consultancy looking at EC curriculum reform. The work undertaken to improve the teacher education curriculum in ECs has resulted in three key documents. These should be read in conjunction with each other as the first provides the rationale behind the changes, the second details the new design proposed, and the third (this report) provides the analysis of what capacity development is needed to support successful implementation. The three documents are summarised in the following table:

Components of the EC Curriculum Reform project:			
Component:	Purpose:		
Teacher Education	Education To review what elements of a curriculum framework currently exist in the EG		
Curriculum	system and assess where improvements are needed to strengthen the		
Review quality of <i>what</i> is being learned and <i>how</i> it is learned.			
Teacher Education To provide a technical overview of what a four-year degree for tra			
Curriculum	primary and middle school teachers could look like. The intention is for the		
Framework	document to aid policy dialogue and decisions.		
Teacher Education To provide an informed assessment of what professional developn			
Capacity	modules will be needed to up-skill TEs to successfully deliver the new EC		
Development Plan Curriculum Framework.			

The purpose of the CDP is to provide the MoE with the information needed to make decisions about how and what support the EC teaching staff, the teacher educators (TEs), will need to effectively implement the new EC Curriculum Framework. It outlines the professional development modules that will be required, and presents an analysis of options of how these could be delivered.

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⁷ UNESCO STEM Education College Curriculum Review p.35

⁸ Ibid p.12

As mentioned in the new EC Curriculum Framework, "the quality of an education system cannot exceed the quality of its teachers". This is applicable to both the Basic Education System and the system of training and producing teachers. The quality of the teacher educators is critical to the success of having quality teachers.

Teacher educators will need to be the driving factor behind the large-scale change programme of introducing a new curriculum. As the 'change agents', they will need to understand what is being proposed in the new EC Curriculum Framework, and have the ability to translate the intended improvements into reality to produce competent, effective teachers. A study on 'Pedagogy, Curriculum, Teaching Practices, and Teacher Education in Developing Countries' highlights the importance of the teacher educators in any teacher education reform. It found that 'the success of curricular reform and initiatives was found to be influenced by the degree of consultation and involvement that took place. Some studies argued that teacher involvement in curriculum planning had not occurred, leaving teachers professionally disempowered by a top-down process and hampered by lack of understanding of the reforms' intentions, and the reforms themselves missing a grounding in the realities of the classroom' 10.

However, it is important to note that the role and capacity of the TEs cannot be considered in isolation. Reforming the teacher education system is complicated and requires systematic and realistic planning; the capacity of TEs is just one component critical to successful reform. During the research for this CDP other important questions about implementation were raised. These are outside the scope of this CDP but are documented in the table below for further reference when planning for 4YD roll out:

Critical considerations:

- 1. Capacity of EC facilities to accommodate potential increase in student teachers and proposed smaller class sizes
- 2. Capacity of EC staff numbers to accommodate potential increase in student teachers and proposed smaller class sizes
- 3. Availability of schools for extended practicum (practicing schools, partner schools and placement schools)¹¹
- 4. Supervision of student teachers carrying out extended practicum
- 5. Capacity of Principals and EC management staff to monitor and maintain the standards set out within the TCSF.
- 6. Availability of ICT hardware and connectivity
- 7. Supply management of teachers to ensure demand is met across the country
- 8. Sustainable funding to support on-going professional development
- 9. Public awareness, understanding and support for the changes to the education system in general
- 10. Motivation of, and incentives for, TEs and student teachers to internalise the concepts, principles, and framework of the new 4YD Curriculum Framework

2.1 Overview of the draft EC Curriculum Framework

The draft EC Curriculum Framework provides the direction and structure for how to improve teacher education in order to ensure new teachers can effectively improve learning outcomes in their

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⁹ McKinsey and Co. (2007), How the world's best performing school systems come out on top, London

¹⁰ Westbrook, J. et al., (2013). *Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries: Final report,* Education Rigorous Literature Review, Institute of Education, Evidence for Policy and Practice Information and Co-ordinating Centre, London, UK, p.28

¹¹ UNESCO STEM Education College Curriculum Framework p.30

classrooms. It has been carefully designed to address specific areas of improvement based on a detailed review of the existing EC curriculum and materials and incorporate relevant learnings from an analysis of international best practice.

The key changes proposed in the draft EC Curriculum Framework are summarised below:

Competency-based, instead of just content-based

The draft EC Curriculum Framework has been designed to train and produce effective teacher practitioners. Therefore, the focus is to ensure that student teachers master the competencies (a combination of content knowledge, skills and attitude) needed to produce effective learning for pupils in a classroom. The key difference between a competency-based and content-based curriculum is that the outcome of a competency-based curriculum is the *ability to teach* rather than just *being knowledgeable of teaching*. The draft EC Curriculum Framework reflects the Teacher Competency Standards (TCSF)¹³, which describe the minimum competency standards a teacher should be able to demonstrate. The competency standards create a bar, which all new teachers must meet to be 'classroom ready'. The framework ensures that the performance of teachers is of a minimum common standard acceptable to authorities and therefore provides a robust quality assurance mechanism to ensure learning outcomes.

The move towards a competency-based curriculum is seen in the proposed restructure of the curriculum and in the recommended methodology. The draft EC Curriculum Framework proposes an integrated approach wherein the underlying educational theory and knowledge required is learned **through** practicing real teaching and applying concepts in the classroom. Student teachers are introduced to complex educational theories not through listening to a lecture but by applying the theories through activities such as designing lesson plans or delivering simulated classes.

The draft EC Curriculum Framework suggests a re-modelling and restructuring of the curriculum learning areas. This includes integrating theory and practice in one module, and curriculum and pedagogy in another. The former means that education theory is learned **through** applying the theories directly to day-to-day teaching tasks such as lesson planning and creating a learning environment¹⁴. The latter means that the academic subjects are also taught in conjunction with how they need to be taught in either primary or middle school; they are no longer standalone subjects¹⁵. Practicum (an enhanced system of 'bloc' teaching) is extended, and two new learning areas aimed at supporting effective teaching have been introduced: core skills (communication, ICT, English etc.), and reflection.

Module No.	Module Name	
1	Educational Studies	
2	Curriculum and Pedagogical Studies	
3	Practicum	

¹² See Section on International Comparisons in the UNESCO STEM Education College Curriculum Review p.37

¹³ The TCSF identifies competency standards across four relevant 'domains' and these are applied to four levels of teacher from kindergarten to upper secondary (high school). The TCSF is currently in draft form but once completed, it will become the set of competencies that all new teachers must demonstrate a minimum acceptable command of. It will therefore effectively control the methods of teaching and the performance needs of teacher educators.

¹⁴ The Theory and Practice of Education module is built around four specific units, reflecting the four domains of effective teaching: Planning and Preparation; Creating a Learning Environment; Developing Learning; Professional Responsibilities. See *UNESCO STEM Education College Curriculum Framework* p.29

¹⁵ This reflects the same teaching approach used in the ECs current Methodology (Training) subjects

4	Core Skills
5	Self-study and Reflection

The draft EC Curriculum Framework recommends revising the methodology in ECs to a more 'constructivist approach' to learning. This is an approach where the teacher educator provides a framework within which the student teachers can discover and construct their own knowledge of how and what to teach. It is a learner-centred approach rather than the teacher/textbook centred approach, which was observed to be the dominant style of teaching in the ECs throughout research visits conducted during the initial Curriculum Review¹⁶, and during the needs assessment work¹⁷. The draft EC Curriculum Framework emphasises practical learning, and a significant proportion of instructional time is spent practicing how to prepare, deliver, and then reflect on lessons given either in a simulated classroom environment in the ECs, or in real classrooms.

"Many countries have moved their initial teacher education programmes towards a model based less on academic preparation and more on preparing professionals in school settings, with an appropriate balance between theory and practice. In these programmes, teachers get into classrooms earlier, spend more time there, and get more and better support in the process." ¹⁸

Primary and Middle School level specialisation options

The draft EC Curriculum Framework proposes introducing specialisation options for primary and middle school student teachers, which are currently not an option given the 'ladder system' of promotion. Following the removal of the ladder system, teachers in the classroom will need to be experts in teaching methods relevant to the developmental stage of their pupils, whether primary or middle school age. This is particularly important in regards to providing early literacy and numeracy in the early grades of primary school. Specialisation is therefore a crucial reform to introduce.

"Children who have not learned to read a text or do basic calculations have little chance of benefiting from higher primary school grades. Moreover, their commitment to education is likely to diminish and they are more likely to drop out." 19

Direct alignment to the Basic Education Curriculum Framework

The objective of the ECs is to ensure student teachers are trained in how to ensure pupils are learning. The content of the draft EC Curriculum Framework is therefore directly relevant to what the future pupils of student teachers will be taught based on the Basic Education curriculum. This means that the EC curriculum needs to:

- Be able to respond to changes at Basic Education level;
- Reflect the content relevant to Basic Education level; and
- Develop deeper pedagogical content knowledge, according to year level.

¹⁷ UNESCO (2016), *Summary of Needs Assessment*, Strengthening Pre-service Teacher Education in Myanmar (STEM) Project, UNESCO, Myanmar

¹⁶ UNESCO STEM Education College Curriculum Review p.29

⁽STEM) Project, UNESCO, Myanmar

¹⁸ OECD (2011) Building a High-Quality; Teaching Profession Lessons from around the world, Background Report for the International Summit on the Teaching Profession p.14. Note: this was referenced in *UNESCO STEM Education College Curriculum Review* p.37

¹⁹ Education for All Monitoring Report and UNESCO Institute for Statistics (2013). Addressing the Crisis in Early Grade Teaching. Policy Paper 07, UNESCO, Paris. Note: this was referenced in the *UNESCO STEM Education College Curriculum Review* p.42

Additional two years of study

Extending teacher education to degree level means an additional two years of training. The draft EC Curriculum Framework proposes that the four-year programme is divided into two cycles, each lasting two years. Students will study the five modules throughout the first two-year cycle and then the same five modules will be calibrated and adjusted to a higher set of expectations, values, and performance standards in the second two-year cycle.

Assumptions to consider

As Myanmar is in a period of transition, there are a number of teacher policy dimensions that have been discussed but policy decisions are yet to be made. The draft EC Curriculum Framework has been written to aid these policy discussions and therefore it has had to include a number of policy assumptions prior to final decisions. A summary of these policy assumptions has been included here as they provide important contextual detail to the discussion around the capacity of teacher educators.

Assumptions	Rationale
5:4:3 system (5 years of primary starting at age 6, continuing through 4 years of middle school (age 11 to 14) on to three years of High school (age 15-17)	K-12 (Kindergarten through to Grade 12) is the international standard for education systems.
Approval of the <i>draft</i> Teacher Competency Standards Framework	It is important the teaching profession has a clear and concise description of the expectations of what teachers should be able to do in order to deliver effective learning.
Removing the ladder system and bridge programme	Creating a hierarchy within the education levels affected by the teaching quality and status of lower level teachers.
Introduction of a Coordination and Regulatory body	An entity is needed to 'coordinate' (ensure consistency and efficiency) and to 'regulate' (ensure quality) the teacher education system.
Teacher policy	A teacher policy is needed to ensure that all teacher-related dimensions can work together in a cohesive system and can be used as a mechanism to regulate the system.

2.2 The key skills required to deliver the core changes proposed in the draft EC Curriculum Framework detailed in this section are covered in depth below in Section 3.1. Overview of the activities undertaken to identify capacity development needs

In order to develop this CDP, a series of activities were carried out to identify and better understand the current gaps in TE skills, in terms of what capacity development is needed to successfully implement the new curriculum.

A multi-phased approach incorporated qualitative methods of enquiry, deemed the most appropriate method to gain a deeper understanding of the underlying perceptions of different stakeholders, reality and opinions, through the use of:

- Guided worksheets (and interviews)
- Focus group discussions
- Classroom observations
- Short multi-choice questionnaires
- Activity-based workshops

2.2.1 Needs Assessment Research

A Teacher Educator Skill Needs Assessment was developed, with approach and tools informed by the draft EC Curriculum Framework, and the types of skills needed to implement it.

Desk-based preparation was followed by consultations with EC management and TEs across four ECs in Bogalay, Lashio, Mawlamyine, and Yankin from 10-20 May 2016. This was done in order to involve EC staff in the change process and to understand their perceptions, existing competence, confidence and understanding. It allowed them the chance to share their thinking on the draft EC Curriculum Framework and to express how they foresee its implementation and significance.

The purpose of the consultations was to ascertain the level of skills, skills gaps, and confidence in skills amongst TEs. These were validated by asking EC Principals, Vice Principals and Heads of Departments to comment on their perception of the TEs' skill levels, and by observing how TEs delivered lessons. The table below outlines details of the activities undertaken and outputs produced by the needs assessment.

Consultation sites	Activity Description	Output
Four ECs were visited by two Montrose consultants and two UNESCO employees, 10-20 May 2016: Bogalay EC Lashio EC Mawlamyine EC Yankin EC	Interviews/guided worksheets with EC principals and vice principals to gather their thoughts on the draft EC Curriculum Framework. Focus group discussions with TEs to identify their opinions on the draft EC Curriculum Framework, and determine their current confidence level in teaching methods.	Report: UNESCO (2016), Summary of Needs Assessment, Strengthening Preservice Teacher Education in Myanmar (STEM) Project, UNESCO, Myanmar
	Lesson observations in classrooms to compare the reality of skills being demonstrated with the perceived level of competence.	

2.2.2 Consultation workshops

Following the Needs Assessment research, a series of consultation workshops were held in Mandalay and Yangon.

The first workshop was held in Mandalay on 13-14 July 2016. Its purpose was to explore and test components of the draft EC Curriculum Framework with the TEs to trial how the concepts will work in practice, and how the TEs responded to the proposed changes. The four key concepts covered by the workshop were:

- An integrated curriculum
- Competency based learning
- Using assessment as a teaching method
- Reflecting on one's teaching

The table below outlines the activities and output of the Mandalay workshop.

Location and Attendees	Activity Description	Output
Location and Attendees Mandalay 13-14 July 2016 Attended by: Representatives from DTET and TEs from ECs in Upper Myanmar: see footnote for list of ECs ²⁰	Activity Description A participatory and activity based methodology formed the basis of the workshop with the aim of determining the TE levels of competency against their perceived confidence. Short multi-choice questionnaires were distributed at the start of the workshop and at the end of the workshop in	Output Report: UNESCO (2016), Education College Curriculum Framework Subject Trial Workshop Outcome Report, Strengthening Preservice Teacher
	order to measure the learning outcomes of TEs. These focused on the four key concepts covered by the workshop. A workshop feedback form was also distributed to gauge general satisfaction with workshop content and delivery.	Education in Myanmar (STEM) Project, UNESCO, Myanmar

The second workshop was held in Yangon on 20-21 July 2016. The purpose of this workshop was to pilot an example professional development module to evaluate how best to build the capacity of the TEs. The table below outlines the activities and output of the Yangon workshop.

Location and Attendees	Activity Description	Output
Yangon 20-21 July 2016	A 'Learn, Reflect, Apply' methodology formed the basis of this workshop, involving reflective activities as well as	Report: UNESCO (2016),
Attended by: Representatives from DTET and TEs from ECs in Lower Myanmar: see footnote for list of ECs ²¹	observation tasks allowing the TEs to apply their learning during the workshop and skills gaps could be identified by the facilitators.	Education College Teacher Professional Development Workshop Outcome Report, Strengthening Preservice Teacher

²⁰ ECs represented at the Mandalay Workshop: Mandalay EC, Sagaing EC, Taunggyi EC, Pakokku EC, Magwe EC, Monywa EC, Meithtalar EC, Myitkyina EC, Loikaw EC, Lashio EC, Taungoo EC

²¹ ECs represented at the Yangon Workshop: Pathein EC, Bogalay EC, Myaung EC, Pyay EC, Khyaukphyu EC, Hlegu EC, Thingangyun EC, Hpa An EC, Mawlamyaing EC, Dawei EC, Yankin EC

Education in Myanmar
(STEM) Project,
UNESCO, Myanmar

2.2.3 Teacher Education Seminar

(Whilst this event was not part of this consultancy it is documented here due to the importance of the issues discussed and decisions announced.)

A two-day Teacher Education seminar was held in Nay Pyi Taw on 4-5 August 2016 by the Ministry of Education. The purpose of the seminar was to discuss the policy changes being considered by the MoE. The seminar agenda included the presentation of papers on both a 4YD and a curriculum framework, and comments were given on the papers during a discussion section. The discussions from this seminar were used to inform the thinking behind this CDP.

Location and Attendees	Activity Description	Output
Nay Pyi Taw	Opening Speech by State Counsellor,	Paper 1: Upgrading
4-5 August 2016	Daw Aung San Suu Kyi	Education Colleges from
		2 to 4 Years, presented
Attendees:	Welcome Speech and Current Status	by Daw Cho Cho San,
Government and MoE	of Teacher Education by Union	Principal of Magwe EC
Officials: State Counsellor	Minister, U Myo Thein Gyi	Paper 2: Curriculum
(opening ceremony only),		Framework for the 4
First Lady (morning only),	Series of presentations and discussion	year Degree, presented
Union Minister of Education	groups on key components of the	by Daw Win Theingi
(opening ceremony only),	teacher education reform	Kyaw, Head of
State and Region Ministers		Department at Yankin EC
of Education		•
MoE Staff: National		Paper 3: Certificates and
Advisors, DGs of MoE		Licensing for Teacher
Departments, UoE/UNDR		Educators by Daw Nyein
Rectors, EC Principals and		Nyein, Taungoo EC
other UoE and EC staff		Principal
DPs/INGOs: UNESCO,		Paper 4: Development of
UNICEF, JICA, Pyoe Pin, Save		Teacher Educators'
the Children, VSO, ADB,		English Skills presented
British Council, World		by Dr. Ni Ni Than,
Education		Sagaing EC Principal

2.2.4 Analysis of Evidence Base

In order to develop an evidence-base for the recommended professional development options outlined in this capacity development plan, an analysis of international examples of how TE professional development is delivered was conducted. This involved a review of examples of teacher educator professional development from international contexts, including amongst other areas, various European Union countries, the United States, Australia, and Bangladesh.

This review reflects on other practices of training both pre-service and in-service teacher educators, and on the different models and approaches implemented in other countries. These include both face-to-face and online models. Further examples of international models are also outlined in Annex 1.

3 SKILLS AUDIT

3.1 Analysis of Skills Needed

To ensure the draft EC Curriculum Framework results in the intended improvements in national learning outcomes, the current approach to teacher education and the role of the teacher educators will need to change.

The dominant methodology observed in the ECs is lecture- and textbook-based teaching which promotes content-based, rather than competency-based outcomes²². The result of this is that though teachers become knowledgeable *about* teaching, they have not necessarily mastered the *ability to actually teach*. The current practical training (bloc teaching) is a 45-day placement in a school, which, due to logistical constraints, is not supervised by the TEs. Despite the intention to use the school principal and TEO as monitors, there remains a disconnect between the theory learned in the EC classroom and the practical reality of the school classroom²³.

The draft EC Curriculum Framework promotes a different approach to the teaching-learning process. Theory and practice will be integrated and all activities will be centred on, and lead to, the attainment of clearly defined teaching competency standards. This change will require TEs to build on and upgrade their existing skill sets and master new skills.

As mentioned in Section 2.2 on identifying capacity development needs, the first stage of the skills audit was to understand what skill sets would be needed to deliver a new competency-based EC curriculum. This was achieved by analysing the proposed modules, methodology and assessment sections of the draft EC Curriculum Framework document for specific skills. These are listed in the table below alongside the key changes outlined in the overview of the draft EC Curriculum Framework (Section 2.1). A version of this list of skills formed the basis of the needs assessment research tools and informed the design of the two workshops. This table shows the analysis of skills required to deliver new curriculum:

Key Changes in the CF (as referenced in Section 2.1)	Skills Required:	Rationale: explanation for why the draft Curriculum Framework promotes these skill sets
Competency-	Modelling	Actively participating in lessons through interactive
based and	methodologies that	activities and discussions is promoted as an effective
integrated	enable active	approach to learning, as learners have to engage with the
approach to	participation*	subject and apply their learning ²⁵ .
learning	Modelling	Learning environments that promote questioning help
theory	methodologies that	learners to develop critical thinking skills as it encourages
through	encourage	curiosity, creativity and application of what they have
practice	questioning and	learned ²⁶ .
	answers*	
	Modelling	Different learners learn in different ways and at different

²² UNESCO STEM Education College Curriculum Review p.29

²⁴ Needs Assessment is short hand for the Needs Assessment: Understanding the Capacity Development Needs of Teacher Educators report (2016)

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²³ Ibid p.10

²⁵ UNESCO STEM Education Curriculum Framework p.49

²⁶ *Ibid.* p. 50

Key Changes in the CF (as referenced in Section 2.1)	Skills Required:	Rationale: explanation for why the draft Curriculum Framework promotes these skill sets
	methodologies to differentiate teaching for different learner- types*	speeds. Planning lesson activities needs to take into account different methods for different learner-types. This is referred to as 'differentiation' ²⁷ .
	Modelling methodologies to deconstruct knowledge*	For learners to understand and effectively learn about new concepts it is important that the concepts are broken down to their simplest form so that the learner can go through the process of building on their existing knowledge making associations and connections ²⁸ .
	Modelling formative assessments strategies	To ensure the learning objective of a lesson is being achieved, a teacher needs to assess comprehension levels during the lesson and adapt the lesson accordingly if comprehension is low ²⁹ .
	Modelling how to develop teaching-learning materials*	A learner-centred approach to teaching, as promoted in the curriculum framework, is a move away from a textbook-centred approach where the text and activities in the published textbook dictate the lesson. Although the textbooks will still remain an important resource, they will no longer be the only resource and therefore teachers will need to learn how to develop relevant materials to support learning ³⁰ .
	Communication skills Constructive feedback on lesson observations	Being able to articulate and clearly explain new concepts is a critical core skill of any teaching-learning process ³¹ . The integrated approach to teaching, where theory is learned through practice means that student teachers will spend more time on teaching practice. This is recognised as being an effective way of getting student teachers ready to teach in a real classroom ³² . Providing advice and suggestions for how student teachers can improve their teaching will therefore be a significant component of the TEs role.
	Self-reflective practice	The process of teaching is complex because it needs to constantly adapt to learners needs and multiple variables. Self-reflection is an important habit to support teachers in continually improving their practice ³³ .
	Up-skilling existing 'academic' TEs How to teach	In the current system in ECs, the TEs in the Academic Department are not expected nor required to have Experience of teaching in a classroom as their area of

²⁷ *Ibid.* p. 50 ²⁸ *Ibid.* p. 32 ²⁹ *Ibid.* p. 52 ³⁰ *Ibid.* p.31 ³¹ *Ibid.* p.35-36 ³² *Ibid.* p.23 ³³ *Ibid.* p.24-25

Key Changes	Skills Required:	Rationale: explanation for why the draft Curriculum
in the CF (as referenced in		Framework promotes these skill sets
Section 2.1)		
Section 2.1)	methodology	expertise is subject matter based. In the proposed
	methodology	integrated system, all TEs will need not only knowledge
		but also the skills to teach knowledge through appropriate
		methodologies. The current Academic TEs will therefore
		need further training opportunities.
Specialisation:	Modelling age-	Specialist pathways have been introduced in recognition of
primary or	appropriate	the differences in teaching different age groups. This is
middle school	pedagogical content	applicable to specific content being taught in a way that is
	knowledge*	relevant to the right development stage of a learner.
	Modelling age-	Specialist pathways have been introduced in recognition of
	appropriate teaching	the differences in teaching different age groups. This is
	methods*	applicable to what methodologies are relevant to the right
		development stage of a learner.
	Early literacy and	Ensuring the foundational skills of literacy and numeracy
	numeracy	are critical for supporting improved national learning
		objectives. This is highlighted in the proposed curriculum
		framework to ensure quality of learning as emphasised in
	Literacy Recovery ³⁵	the Sustainable Development Goals ³⁴ .
	Literacy Recovery	Ensuring that students who have fallen behind in their early learning have the support needed to master the
		foundational skills of literacy.
	English proficiency	All TEs need to be proficient in English to be able to teach
	Linguisti promoterio;	English language and any TEs teaching middle school level
		will also need English to teach Maths and Science. English
		is also the language of the internet and therefore a
		requirement for accessing much of the information and
		resources available online.
Aligned to	Curriculum	The introduction of a localised curriculum means that TEs
Basic	development skills	will need more skills within the ECs to develop their own
	_	
content	•	
	material*	•
Additional	Adult-annronriate	
the years	<u> </u>	
		· · · · · · · · · · · · · · · · · · ·
	the end	·
		extra years. The TEs need to be taught how to effectively
		train this more mature age group ³⁷ .
_	development skills Modelling how to develop subject material* Adult-appropriate learning styles as the student teachers will be more mature by	is also the language of the internet and therefore a requirement for accessing much of the information and resources available online. The introduction of a localised curriculum means that TEs will need more skills within the ECs to develop their own localised curriculum content and materials For the subject knowledge to remain relevant, teachers need to be able to create teaching learning materials that reflect the Basic Education curriculum and convey the prescribed concepts in the most appropriate way for their learners ³⁶ . Student teachers will be older in the proposed system; due to the extension of the Basic Education system to include Grade 12 (a 5:4:3 system), student teachers will be a year older when they enrol and with an extra two years of teacher training, will remain student teachers for two extra years. The TEs need to be taught how to effectively

http://www.un.org/sustainabledevelopment/education/
55 See p.24 of this CDP for an explanation of literacy recovery
6 lbid. p.31
7 lbid. p.50

Key Changes in the CF (as referenced in Section 2.1)	Skills Required:	Rationale: explanation for why the draft Curriculum Framework promotes these skill sets
	Self-directed learning	TEs need the opportunity for continuous professional development opportunities. Much of this could be delivered through self-directed learning- either research focused or through structured online learning programmes.
	Action research	As key stakeholders in the education system and education reform, TEs should play a leading role in research and innovation in the sector.
	ICT proficiency	Competence and confidence in using computers and mobile-learning will allow TEs to access the wealth of teaching-learning resources now made available on the internet and complete online learning courses ³⁸ .

^{*}The term modelling is used to describe how TEs will need to be adept in demonstrating and using these teaching methods in the ECs so that student teachers can then copy the same methods in school classrooms.

This analysis is corroborated in the section of the draft EC Curriculum Framework that describes the key characteristics of a teacher educator³⁹. This minimum set of competencies reflects the skills listed above:

- A degree-level qualification in either Education or a relevant academic subject;
- Proficiency in English;
- Prior experience teaching in Myanmar schools at Primary and/or Middle school levels, and in using the methodologies and school textbooks in the classroom;
- Competency in the use of ICT sufficient for resourcing ideas and materials relevant to their own teaching, using ICT in their training classrooms and for keeping records of student achievement and progress;
- The skills necessary to reflect on their activities and to employ meaningful self-evaluation of what they are doing and how they are doing it;
- The ability to communicate with school management and the classroom teachers working with student teachers during their school placements; and
- Proficiency in carrying out effective classroom observations of student teachers, giving constructive feedback, assessing student performance, and coaching and mentoring them so as to increase their teaching competence and confidence.

In addition to the specific skill sets needed to train student teachers in the new EC Curriculum, TEs will also need to understand and believe in the changes. As mentioned in Section 2, the TEs need to become the agents of change in this reform. This means that in addition to equipping them with specific skill sets, they need to be supported in becoming true advocates of the proposed reforms and changing their own teaching behaviours and habits to reflect these. To do this, they will need to have:

- A thorough understanding of the rationale behind the changes
- The practical opportunities to explore and test new concepts in relation to prior attitudes and assumptions

[്] *lbid*. p.45

³⁹ UNESCO STEM Education College Curriculum Review p.43

• Feel recognised as valuable and respected stakeholders in the change process

"People must feel comfortable about change to carry it out with enthusiasm, they must understand the role of their actions and believe that the proposed changes are worthwhile for them to play a part. Anyone leading a major change programme must take the time to think through its 'story' – what makes it worth undertaking – and to explain that story to all of the people involved in making change happen, so that their contributions make sense to them as individuals."

This quote from a change management specialist working with the international consulting firm McKinsey and Company reiterates the importance for each individual TE to understand the rationale for change in order for them to adopt the mind-set change required to implement the draft EC Curriculum Framework.

A recent study on teacher educators states that:

"For teacher educators to take responsibility for improving the quality of teacher education, it is important that they feel recognized as key stakeholders and can develop ownership and agency concerning the profession and its development; professional leadership should be acknowledged and strengthened. The opinions and expertise of teacher educators should be acknowledged in social and professional dialogues." ⁴¹

3.2 Analysis of Skills Gaps

As seen in Section 2.2 on the activities undertaken to identify capacity development needs, needs assessment research and two consultation workshops were carried out with TEs and EC management to gather evidence on their perceptions and competency level of the skills identified. The key findings of these research activities are outlined in this section. These include insights into what skills should be delivered and insights into how best to present the professional development modules.

Empowering TEs to become agents of change

During both the needs assessment research and the two workshops, the TEs demonstrated positive attitudes towards the key ideas of the draft EC Curriculum Framework and the new approach to teacher education that these necessitate. All respondents in the needs assessment expressed understanding of the changes being proposed (100 per cent of respondents⁴²). Many of the questions raised during the discussions were concerned with the timeline of the reform and confirmation that the reform would actually happen, rather than concerns over the reform itself.

However, during the research and consultations it became clear that there is a need to provide much clearer and more tangible explanations of the key concepts being promoted. In the course of discussions at ECs for the needs assessment research, many of the TEs recognised the terminology being talked about in the draft EC Curriculum Framework but could not define what the terminology meant and how it would impact their teaching practice.

⁴⁰ Lawson, E (2016), McKinsey and Company: The psychology of change management, London, UK

⁴¹ European Commission (2013) *Supporting Teacher Educators,* Thematic Working Group 'Teacher Professional Development', Education and Training Department p.36

⁴² UNESCO (2016) *Needs Assessment:* Understanding the Capacity Development Needs of Teacher Educators report, Strengthening Pre-service Teacher Education in Myanmar (STEM) Project, UNESCO, Myanmar, p.2

Findings from the Curriculum Framework Trialling Workshop in Mandalay reiterated the need to strengthen TEs' understanding of key concepts such as 'competency-based curriculum', and 'integrated approach'. This was shown in the responses TEs provided to questionnaires on the draft EC Curriculum Framework at both the beginning and end of the workshop. Their responses to the first questionnaire indicated that almost two-thirds⁴³ of participants understood an 'integrated approach' to mean a range of things. The responses varied from; using IT in all subjects, to conducting teaching practice at Education Colleges, and teaching subjects separate from methodology. Only around a third⁴⁴ of participants understood it to mean use of participatory, learner-centred methodologies to teach content. By the end of the workshop there were indications that the TEs were grasping the concepts of; an integrated approach, competency based curriculum, using assessments as a teaching method, and reflective teaching practices. However, it was clear that there is a broad need to ensure a more solid understanding of the terminology and concepts being promoted in the draft EC Curriculum Framework. In addition, there was a noticeable gap between what TEs said they understood and what they said they would do in a real-life situation. To ensure TEs have a thorough understanding of the proposed concepts in order to be effective change agents, this gap needs to be addressed. It will be important to deconstruct and build on their preexisting knowledge at the beginning of each professional development topic. An awareness of concepts but a lack of knowledge concerning how to apply them will hinder TEs' ability to correctly apply theory into practice in the classroom and undermine their confidence.

Comprehensive training required

The needs assessment research was designed to identify specific skills gaps. In the course of research, it became apparent that of the skills listed there was no consensus across the four ECs as to which skills were the most needed. The bar graph below illustrates the range of confidence levels within the same skills.

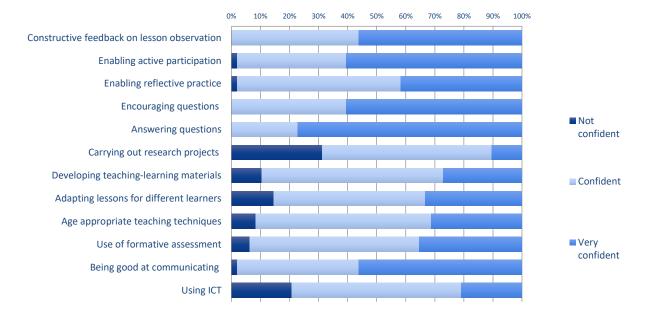


Figure 1: Perception of specific skills required, in the view of Teacher Educators (2016)

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⁴³ N=16 out of a total 26 participants. UNESCO (2016), *Curriculum Framework Trialling Workshop Outcomes Report*, p. 10

⁴⁴ N= 10 out of a total 26 participants. Ibid, p. 10

The conclusion drawn is that the capacity building strategy will need to provide a comprehensive cover of all skills. Currently, TEs receive minimal professional development; there is no pre-service training course and no institutionalised support. Other than a reference to occasional refresher-type courses⁴⁵, it seems the only training available to TEs is the British Council and VSO managed 'English for Education College Trainers' (EfECT) project. Over the last two years, this has provided English proficiency and teaching methodology training to TEs in all ECs⁴⁶. The limited professional development to date further supports the notion that providing comprehensive training, to both improve existing skills as well as introduce new skills, should be prioritised.

The need for more training was echoed in the Yangon workshop on teacher professional development, where in spite of the majority of TE participants (25 out of 26) feeling able to teach an integrated curriculum, there was still a strong desire for more training on how to do so, as expressed by 25 out of the 26 participants.⁴⁷

The TEs' own perceptions of their training needs provided a useful insight into their self-reflections as it very much aligned with the analysis of the skills needed. During both the workshops in Mandalay and Yangon, TEs were specifically asked about what training they would like to receive. Their responses are listed in the table below and reflect the range of different trainings in demand:

Training areas requested by TEs during the Mandalay and Yangon workshops (2016)

Training areas requested by TEs	from both Lower and Upper Myanmar
Individual mentoring	Understanding the proposed changes to the curriculum
Adult learning techniques	Constructive feedback for student teachers
English proficiency	Classroom management skills
ICT proficiency	Facilitating inquiry-based learning
Early literacy and numeracy	Facilitating lesson observations and micro- teaching
Research methodologies	Mentoring the student teacher to develop relevant teaching-learning materials
Learning to deconstruct knowledge into concepts	Assessing student teachers' practice
Learning to reflect on their own teaching practice	Teaching student teachers how to adapt lesson delivery to specific scenarios
Age-appropriate pedagogies	Understanding competencies, performance standards and indicators of performance
Curriculum development	Child centred Learning
Mentoring in self-reflection	

Build competence and confidence: practical training

It will be important to ensure TEs are both *competent* and *confident* in delivering the new approach to teacher education. If they are not *competent* then the quality of teaching and improved learning

http://www.britishcouncil.org.mm/programmes/education/english-education-college-trainers-efect

⁴⁵ British Council and VSO (2014) *Needs Analysis: English for Education College Trainers (EfECT)* p.13

⁴⁶ British Council, 2016, English for Education College Trainers (EfECT):

⁴⁷ UNESCO (2016) Teacher Professional Development Workshop Outcomes Report, p. 12

outcomes is directly compromised; if they are not *confident* they will not make use of their new teaching competencies and therefore the quality and outcomes are again compromised.

The Needs Assessment research shows that even where TEs are confident in their skills, this did not necessarily align with demonstrated competence⁴⁸. The graph below provides a comparison between the data collected on the TEs' perceptions and the data collected during the classroom observations carried out at ECs during the Needs Assessment research on how often the specific skills were demonstrated:

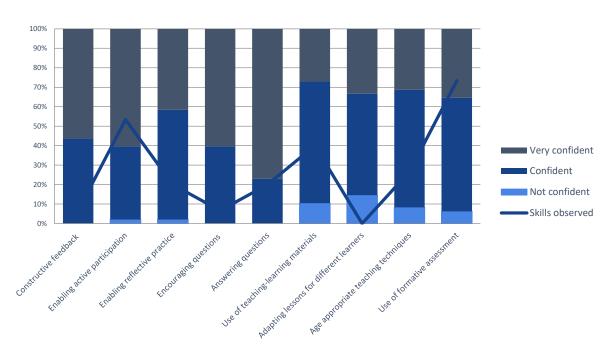


Figure 2: Teacher Educator perceptions of their confidence in skills against actual ability to demonstrate these skills (2016)

The fact that such a high proportion of TEs still felt in need of more training at the Yangon workshop on professional development is a further indication that confidence levels need to be raised.

To ensure alignment of confidence in skills as well as actual demonstration of skills, all training modules must allow for opportunities to practice and develop competencies as well as build confidence so that TEs are able to use them in practice. The workshop findings also concluded that the approach of 'Learn, Apply, Reflect' will be an important model to emphasise in professional development training.⁴⁹

Focus on new skills areas

Although no overall consensus on priority needs was reached in the needs assessment, the exercise did highlight that the two skills that TEs reported having the lowest confidence in (taken from the skills with the highest proportion of 'not confident' ratings) were the relatively new skills of carrying out research projects and using ICT.

⁴⁸ For the avoidance of doubt, the research did not sample the responses on confidence and demonstration of competence of individual TEs, so no direct conclusions can be drawn that individual TEs stated confidence and then demonstrated a different competency. However, the broad data on statement of confidence and demonstrations of competence provides a useful comparison for broad conclusions to be drawn from.

⁴⁹ UNESCO (2016) Teacher Professional Development Workshop Outcomes Report

As both of these skills are relatively new to TEs it is understandable that they are less confident in applying them. This finding is reflected in the design of the CDP modules with due attention paid to the new skill sets that the TEs need more specific support and practice in.

Competency standards

As described in Section 2.1 on the overview of the draft EC Curriculum Framework, the proposed structure is carefully calibrated with the Teacher Competency Standards Framework (TCSF). The TEs will need to be knowledgeable and skilled in what these competencies are, and in how to bring student teachers up to minimum performance standards in a variety of areas. What these areas are will need to be addressed in the personal development modules, as the TCSF is still in draft form and this will therefore be a new product and process for all TEs.

Specialist teachers

TEs do not currently specialise in either primary or middle school teaching. Many of the TEs have experience of teaching in either primary or middle or both, but to date this has not been a critical factor. It should be noted that participants in the Mandalay workshop still expressed strong beliefs of primary teaching as of lower status and importance than secondary teaching. This is acknowledged as a critical attitude to address and reframe, in order for primary teaching to be recognised as a highly skilled and important role for children's foundational development and success in future learning. ⁵⁰

Curriculum development

The draft EC Curriculum Framework is directly aligned with the Basic Education curriculum and the purpose of the ECs is to equip new teachers with the competencies needed to teach in the Basic Education system. The Basic Education curriculum is currently under reform but the most recent framework (approved May 2015) proposes timetabled periods on 'local curriculum'. This content will be developed at State/Regional level and therefore curriculum development will become a new skill needed within the ECs.

Lecturers in Academic subjects

The current curriculum is divided into academic subjects and methodology subjects. The TEs who teach the academic subjects need to have a degree in their subject, but there is no pre-requisite for them having any teaching experience. With the new emphasis on integration of theory and practice, this points to a gap in their skill set. This will need to be addressed in terms of understanding and practicing basic teaching theories and methodology.

⁵⁰ UNESCO (2016), Curriculum Framework Trialling Workshop Outcomes Report, p. 12

4 RECOMMENDED PROFESSIONAL DEVELOPMENT MODULES

Based on the skills audit above, this section recommends an outline plan of the Professional Development Modules needed to equip the TEs with the skills required to implement the draft EC Curriculum Framework. It provides an overview of a series of recommended professional development modules along with a rationale, an outline of the topics the module would include, and a basic indication of suggested timeframes to aid decision making on costing and implementation plans. This section focuses on planning the content required; the subsequent section looks at options of how best these modules could be delivered.

In designing this set of modules, the following considerations have been taken into account:

- There is a need to prioritise certain trainings to meet the short-term demands of implementing the reforms, but these should not be at the expense of the longer-term need for continuous professional development (CPD). For this reason, the plan proposes a twophased approach:
 - O Phase 1: a time-bound series of professional development modules that address the immediately required skills for implementing the draft EC Curriculum Framework. These modules should be used as pre-service training for all future recruited TEs. Seven modules address TE needs, and a further additional module should be delivered to those who will train the TEs (training of trainers).
 - Phase 2: a longer-term outlook on strengthening and up-dating TEs' core skill sets through an on-going series of continuous professional development modules and self-directed study. These are not discussed in the same level of detail as the Phase 1 modules because they will need to reflect the capacity development demands of the time.
- The **modules** are **listed** in **order** of **priority** in terms of timing. Where a module comprises a series of inter-related topics, these are also listed in terms of priority.
- There is a need to accommodate the proposed options for specialisation and therefore
 where relevant, the list of training attendees is specified as either 'all TEs' for non-age
 appropriate training, or split into two groups, 'Primary' or 'Middle', for age-appropriate
 sessions.
- Modules 6a and 6b look specifically at up-skilling TEs in becoming education-level specialists. These modules are listed last this does not reflect lower significance, but rather that the specialist track is not active until the end of Year 1 and therefore there is the opportunity for more time to deliver this module if needed.
- The TEs who teach the academic subjects are not currently required to have practical teaching experience. The pre-requisite is a degree in the relevant academic subject. As the new curriculum is based on an integrated approach to learning subject content, these TEs will need additional support to up-skill their knowledge and skills in teaching methodology. They should complete the seven modules proposed here as appropriate, but will likely need to be additional support on:
 - Understanding educational theory and practice (based on the integrated approach outlined in Module 1 of the Curriculum Framework)

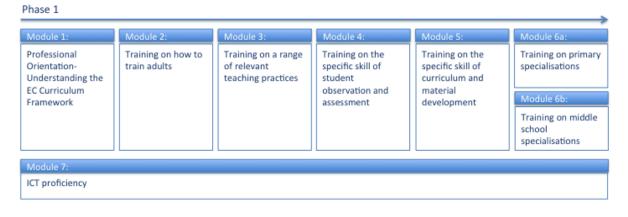
- A compulsory period of practicum in school classrooms to give them a real life experience of teaching.
- Modelling the methodology prescribed in the draft EC Curriculum Framework, these
 modules should focus on practical and exploratory training, and should ensure that TEs are
 both competent and confident in each skill. It is recommended that at the end of each topic,
 TEs are assessed on their ability to demonstrate the relevant competency.
- Teacher educators should be **responsible for their own learning**. To support this, TEs should each be in charge of creating their own TE Handbook, investing time after each training to reflect and document what they have learned for later reference.
- The **timeframes** proposed are indicative and based on a combination of (i) the volume of estimated content, and (ii) the team's experience of delivery of training in the Myanmar context, with all the need for accurate translation and practical demonstration of concepts for deeper understand that this entails, including the trialling workshops conducted as part of this STEM work. It is expected that each day of the Module Trainings would be a combination of theoretical explanation in the morning sessions, and practical exercises in the afternoon sessions in order to cement understanding of concepts introduced on a daily basis. These timeframes will need to be refined when the modules are designed in full.

4.1 Phase 1 – TE Training Modules

This section outlines a series of seven modules *deemed immediately necessary* to implement the draft EC Curriculum Framework.

This series of modules has been designed to get the TEs 'classroom ready'. Six of the modules are consecutive and based on priority timings; Module 7, which focuses on ICT is an iterative module that runs alongside the others.

Figure 3: Overview of the recommended Phase 1 Modules



TE Module 1: Professional Orientation – Understanding the draft competency-based EC Curriculum

- Attendees: All EC professional personnel; all TEOs and ATEOs; selected MoE personnel
 - The reason this module is open to a range of stakeholders is to ensure they all have a clear understanding of the changes being brought in and can support the reform through their respective roles.
- Single session: 56 hours in total (7 days)

This is a foundational module to be completed at the beginning of the proposed professional development programme. The purpose of this module is to ensure TEs have a sound understanding of the key concepts and why they are relevant to improving the learning outcomes in schools. It is focused on supporting TEs to become change agents. The introduction of the draft EC curriculum requires the TEs to adopt new approaches that differ from the way they may have previously experienced learning and have practiced teaching. When they themselves were in school they will have experienced a highly lecture- and textbook-based style of teaching, which they will most likely have adopted as TEs. As the draft EC Curriculum Framework proposes an entirely different approach, TEs' previous practices will need to be deconstructed and re-worked so that TEs feel a sense of ownership over their own understanding of the reforms. The EC Curriculum Review needs assessment research, and pair of consultation workshops all indicate that while TEs are generally in favour of the draft EC Curriculum Framework, there are currently gaps in knowledge and understanding about specific aspects of the proposed approach.

Although this module is mainly theoretical, the content should be delivered through activities that model the new methodologies being proposed. If the new curriculum is rolled out in phased batches (see Section 5.1), it would be useful for TEs from earlier batches to be invited to speak and answer questions at these sessions; learning directly from their peers and their own experience will help contextualise the changes.

The seven-day training will cover the following topic areas:

	Topic Areas	Summary of Content
1.	Rationale for introducing the draft Curriculum Framework (8 hours)	Introductory session providing TEs with an evidence base for the proposed changes to the EC curriculum. This will include the supporting educational theory and examples of international best practice to help inform the rationale for mind-set change in TEs.
2.	Teacher Competency Standards Framework (8 hours)	Introductory session to explore why the minimum performance standards are important for improving the teaching profession. This will include an overview of what the competency standards are and how they were developed, along with a practical account of how they will be implemented. International best practice examples will be used as an evidence base.
3.	Competency-based curriculum (8 hours)	Introductory session to explore the educational learning gains of introducing a competency-based curriculum. This will include the practical examples of competency-based learning to demonstrate how it builds on but differs from the more traditional content-based curriculum. International best practice examples will be used as an evidence base.
4.	Integrated curricula (8 hours)	Introductory session to explore the educational learning gains of an integrated approach to learning theory through practice. This will build on the previous topic on competency-based curriculum. International best practice examples will be used as an evidence base.
5.	Constructing knowledge (8	Introductory session to explore the educational learning gains of a constructivist approach to learning. This will focus on the importance of

	Topic Areas	Summary of Content
	hours)	self-discovery and an individual's knowledge construction and the theory of why this results in better learning outcomes. It will include activities where the learner is at the centre of 'constructing' their own learning process. International best practice examples will be used as an evidence base.
6.	Formative assessment (8 hours)	Introductory session to explore the educational learning gains of using assessment as a teaching method in the classroom to inform the teaching-learning process. This will include exploring a range of different assessment techniques such as open questions and class demonstrations, to gauge whether or not the learning objectives have been reached per lesson. International best practice examples will be used as an evidence base.
7.	Aligning with the Basic Education Curriculum (8 hours)	Introductory session to provide TEs with a good understanding of the Basic Education curriculum and the rationale behind any recent changes. This will cover both the expectations in terms of subject matter content, methodologies being promoted and assessment structures.

TE Module 2: Effective Training of Adults

Attendees: All TEs

• Single session: 16 hours in total (2 days)

Currently the TEs rarely receive specific pre-service training in how to teach adults to teach, and their teaching experience is predominantly in teaching school-age children. The purpose of this short module is to equip TEs with the techniques needed to provide age-appropriate training to adults. TEs need to be able to balance the skills of training adults to become competent (adult learning) with being able to model the appropriate methodologies needed for primary and middle school aged pupils. To be able to do this, they need a practical understanding of the differences between teaching children and training adults. With the additional two years of teacher education and the introduction of grade 12 to high school, the student teachers will be at least 20 years old when they graduate as a newly qualified teacher. Their increasing maturity should be reflected in how they are trained, and TEs need to be aware and equipped with the right skills to support student teachers to take on more responsibility of their own learning as this is a new expectation introduced in Years 3 and 4 of the new EC curriculum.

The two-day training will focus specifically on the following topics:

	Topic Areas	Summary of Content
1.	Adult learning techniques (8 hours)	This topic will equip TEs with the specific techniques needed to train adults. This will include a participatory approach to exploring the differences between teaching and training and practical examples of how to effectively engage adult learners and engender a self of autonomy and accountability over their own learning.
2.	Self-motivation and self-directed learning (8 hours)	This topic will equip the TEs with techniques on how to engender a sense of ownership of learning amongst their student teachers.

TE Module 3: Effective Teaching Practice

- Attendees:
 - o Group 1: Primary school TE specialists
 - o Group 2: Middle school TE specialists
- Multiple day-long sessions: 80 hours in total (10 days)

This comprehensive series of individual topics covers the main skills identified in the audit. The purpose is to ensure TEs are equipped and confident in all the critical skills needed to deliver the EC Curriculum Framework. Many of these topics are not new to the TEs and will be designed to build on and strengthen existing knowledge and practices. They are listed in order of priority, starting with the most complex and unknown and progressing to the most familiar, or those skills more relevant to the third and fourth years of the degree course, e.g. research methodologies.

These skills have been identified as critical to the draft EC Curriculum Framework, but are applicable to many teaching and learning environments as they reflect international trends in best practice in the teaching-learning process⁵¹. These skills need to be practiced and updated as part of the TEs' continuous professional development. This module is therefore also proposed as an on-going module in Phase 2 of this plan.

The series of individual daylong training workshops will cover the following topics:

	Topic Areas	Summary of Content	
1.	Understanding knowledge concepts (8 hours)	Understanding concepts of knowledge – what it is and how it is best acquired – are fundamental to teaching theory. Concepts of knowledge transfer new to the Myanmar education system will be introduce through the reforms, which need fundamental understanding, by TEs. This topic will allow TEs to explore the theories of knowledge an knowledge management to understand how knowledge can be broke down to help support knowledge transmission and knowledge transfer when teaching.	
2.	Enabling active participation to support learning outcomes (8 hours)	This topic will allow TEs to explore how to train student teachers in interactive teaching strategies in order to help them engage their pupils and encourage them to be active participants in their learning process.	
3.	Developing relevant teaching-learning materials (8 hours)	This topic will allow TEs to explore and practice how to train student teachers in developing teaching-learning materials relevant to the both the subject and developmental stage.	
4.	Adapting lesson delivery to specific scenarios (8 hours)	This topic will allow the TEs to explore and practice how to train student teachers in managing the reality and changing nature of real classrooms. It will include sessions for example on how to train multigrade and multi-lingual classrooms.	

⁵¹ UNESCO STEM Education College Curriculum Review p.45-46

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5.	Adapting lesson delivery to different learners (8 hours)	This topic will allow the TEs to explore and practice how to train student teachers in effectively accommodating different learner-types in one lesson. It will include practical examples of how to appeal to visual, audio and kinaesthetic learners, and how to make sure student teachers learn how to incorporate these into their lesson and assessment planning.
environments that encourage student teachers to ask questions that promote thinking. Through simulated environments TEs will be able questioning, how to support student teachers to have the confidence to		This topic will allow the TEs to explore and practice how to train and encourage student teachers to ask questions that promote critical thinking. Through simulated environments TEs will be able to practice how to support student teachers to have the confidence to create unpredictable situations where they cannot prepare for all answers.
7.	Managing classrooms (8 hours)	This topic will allow the TEs to explore and practice how to train student teachers to create the right environment for learning through classroom management and positive discipline strategies.
8.	Self-reflective practices (8 hours)	This topic will allow TEs to learn how to articulate the importance of self-reflection and explore specific techniques of how to help student teachers develop their own effective self-reflective habits.
9.	Reflection and dialogue (8 hours)	This topic will allow TEs to explore and practice how to engender a constructive and reflective learning community within the ECs. They will learn specific techniques on how to structure reflective dialogue and constructive feedback sessions to help student teachers critically examine and regulate their practice. The TEs will be introduced to the concept of the cohort toolkit ⁵² and their role in helping the student teachers develop this.
10.	Research methodologies (8 hours)	This topic will allow TEs to explore and practice how to support student teachers in understanding and mastering the research methodologies needed for their self-directed study.

TE Module 4: Effective Student Observation and Assessment

• Attendees:

o Group 1: Primary school TE specialists

- Group 2: Middle school TE specialists
- Multiple day long sessions: 48 hours in total (6 days)

With the emphasis on teaching practice, observation and formative assessment techniques will become key TE activities in the ECs. As practical classroom skills are at the core of good teacher training⁵³, it follows that the skill of teaching students to convert their theoretical knowledge to ensure sound learning outcomes in the classroom must be a priority consideration for the upgrading of TE training. The purpose of this module is to ensure TEs are able to develop effective observation

53 UNESCO STEM Education College Curriculum Framework p.51

⁵² UNESCO STEM Education College Curriculum Review p.37

tools, define and assess student teachers against learning competencies, and provide constructive feedback.

As well as learning the practical techniques needed, this module will also provide the opportunity to introduce the TEs to the Teacher Competency Standard Framework (TCSF). TEs will need to understand the need for the competency standards, and learn how to use these to structure their lessons and assessments.

This learning area is recommended as a separate module because it is deemed the most dominant skill needed i.e. this skill will be needed more frequently in the ECs. Going forward, this skill set is integrated into the Effective Teaching module in Phase 2.

The series of inter-related trainings will cover the following topics:

	Topic Areas	Summary of Content	
1.	Simulating classroom environments and facilitating micro- teaching (8 hours)	This topic will support TEs in facilitating practice teaching environments for the student teachers in the ECs. TEs will be able to explore different techniques in how to organise and manage micro-teaching and full class practice sessions.	
2.	Lesson observations: developing lesson observation checklists (8 hours)	This topic will build on the previous topic and allow TEs to practice how to carry out effective lesson observations. This will include time spent on evaluating existing observation checklists used, developing new checklists, and using the outputs in constructive dialogue.	
	Assessing student teachers' practice against competency standards (8 hours)	This topic will allow TEs to apply the competency standards framework directly to lesson observations. This will include time spent on practicing how to translate the competencies into relevant indicators that the student teachers can work towards and demonstrate.	
3.	Providing constructive feedback to student teachers (8 hours)	This topic will allow TEs to explore and practice effective approaches to delivering constructive feedback. This will become the critical mechanism for student teachers to learn through doing.	
4.	Preparing for practicum (8 hours)	This topic will support TEs in learning how to best support their student teachers in preparing for the various different practicums. TEs will practice how to help student teachers work independently and construct their own learning checklists.	
5.	Mentoring student teachers (8 hours)		

TE Module 5: Effective Curriculum and Material Development

- Attendees:
 - o Group 1: Primary school TE specialists
 - o Group 2: Middle school TE specialists
- Multiple day long sessions: 32 hours in total (4 days)

As the education system adopts a more decentralised approach to support learning outcomes, the TEs will need more skills within the ECs to develop both curriculum and materials. The purpose of this module is to equip the TEs with the basic knowledge needed to develop localised curriculum content and supporting materials, and to understand and meet the expectations of the changing Basic Education curriculum⁵⁴. JICA has been providing some training on the Basic Education curriculum, which would need to be aligned to this proposal if it is re-started after potential revision of the Basic Education Curriculum by MoE.

This learning area is recommended as a separate module because this is recognised as a relatively new skill and therefore has little prior knowledge to build on. To date, the curriculum and materials have been predominantly the textbooks, and there has been little requirement to develop these further independently⁵⁵. Going forward, this skill set is integrated into the Effective Teaching module in Phase 2.

The series of inter-related training will cover the following topics:

	Topic Areas	Summary of Content
1.	Curriculum development (16 hours)	This topic will introduce TEs to their new expanded role of supporting curriculum development. This will include techniques on actual curriculum design and development and methods in how to stay up-to-date on changes within the Basic Education system.
2.	Subject material development: basic design skills and design processes (16 hours)	This topic will allow TEs to explore and practice how to train student teachers in how to translate content knowledge into relevant teaching-learning materials. This will allow them to deliver more creative classes outside of the constraints of textbook-based teaching.

TE Module 6: Demonstrating Age-Appropriate Pedagogies

Module 6a: Effective Primary school teaching

Attendees: Primary school TE specialistsMultiple sessions: 72 hours in total (9 days)

One of the major differences in the draft EC Curriculum Framework is that student teachers will specialise as either a primary or middle school teacher. The purpose of this module is to support the

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⁵⁴ The Basic Education Curriculum Framework (approved May 2015) includes a new subject area referred to as 'Local curriculum'; this is a number of teaching periods each week allocated to locally defined topics. Please see *UNESCO STEM Education College Curriculum Framework* p.12

⁵⁵ UNESCO STEM Education College Curriculum Review

TEs in strengthening their ability in training for the primary school specialisation option. Teaching children of different age groups calls for the application of calibrated skills and TEs are going to need training in this.

A critical component of this training will be to up-skill TEs in early literacy and numeracy instruction. The intention of the education reforms is to improve the learning outcomes in schools, and as such, ensuring the foundational skills of literacy and numeracy is critical and this is promoted as a fundamental objective.

As mentioned above, this is listed as the sixth module as student teachers spend one year studying the core curriculum before specialising so feasibly, depending on the availability of TEs, this professional development module could be delivered during Year One.

The series of inter-related trainings will cover the following topics:

	Topic Areas	Summary of Content	
1.	Primary school age- appropriate pedagogical content knowledge (16 hrs)	pedagogical content knowledge. This will include revising the psychological development stages of children aged 5-9 and exploring	
2.	Primary school age- appropriate teaching methods (16 hrs)	This topic will build on the previous topic of age-appropriate pedagogical content knowledge by applying a psychological approach to cognitive development to designing teaching methods.	
3.	Early literacy and numeracy instruction (40 hrs)	This topic will provide TEs with the specific skill sets needed to ensure all pupils in primary school have the opportunity to become functionally literate and numerate. Using best-practice techniques from around the world, these sessions will equip TEs with the toolkits they need to ensure all student teachers who specialise in primary school teaching are able to support their pupils in being literate and numerate.	

Module 6b: Effective Middle school teaching

• Attendees: Middle school TE specialists

Multiple sessions: 80 hours in total (10 days)

This module mirrors 6a but is relevant to TEs teaching middle school student teachers. The content taught will reflect the different education level. This module will also include a section on 'literacy recovery', which is targeted at students who have fallen behind in their learning early on and need additional support to catch up. Many children globally attend school but due to poor literacy and numeracy fail to progress academically⁵⁶.

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⁵⁶ http://www.un.org/sustainabledevelopment/education/

Literacy recovery is important in ensuring national learning outcomes. Australia's literacy recovery programme, 'MultiLit', provides a good example of an effective programme which incorporates the essential reading components of 'word attack skills'⁵⁷, sight word recognition, and reinforced reading to support older children in mastering the functional skills needed.⁵⁸

The series of inter-related trainings will cover the following topics:

	Topic Areas	Summary of Content	
1.	Middle school age- appropriate pedagogical content knowledge (16 hrs)	This topic will allow TEs to focus specifically on middle school age pedagogical content knowledge. This will include revising the psychological development stages of children aged 10-14 and exploring how this understanding of their cognitive development can be used to design how to best communicate knowledge content.	
2.	Middle school age- appropriate teaching methods (16 hrs)	This topic will build on the previous topic of age-appropriate pedagogical content knowledge by applying a psychological approach to cognitive development to designing teaching methods.	
3.	Literacy recovery (24 hrs)	This topic will provide TEs with the specific skill sets needed to ensure all pupils in middle school are functionally literate and numerate. Using best-practice techniques from around the world, these sessions will equip TEs with the toolkits they need to provide recovery lessons to support pupils who struggle with reading or writing Myanmar language.	
4.	Subject specialisation revision (24 hrs)	This topic will give TEs the opportunity to revise their subject specialism. The course will be directly informed by the Basic Education curriculum content and will be an opportunity for the TEs to clarify queries and practice how to deliver specific components of the curriculum.	

TE Module 7: ICT proficiency

Attendees: All TEs and EC management

• Multiple sessions: min. of 1 hour per week

The ICT proficiency module is an iterative module that runs throughout Phase 1. The objective is to up-skill all TEs' confidence in using ICT for further work-related activities. All TEs and EC management will need to sit a competency-based assessment prior to module-start. If they can demonstrate proficiency, they will be exempt from having to complete this module, but will need to complete the more advanced ICT modules in Phase 2. The focus of this module will be to ensure all TEs can confidently access a search browser for online research and can independently complete online learning activities. Enabling TEs with these skills is important for their ability to continue with self-directed learning. The modules will be delivered in the ICT classrooms in each EC, but will also

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⁵⁷ Word attack strategies help students decode, pronounce and understand unfamiliar words through picture clues, sounding out words, connecting unknown words with known words and looking for familiar letter groupings within words

⁵⁸ Macquarie University, 2016, MultiLit – Professional Development: Reading and tutor programme, Sydney, Australia

include training on using personal handheld devices (smart phones and tablets) for the same activities⁵⁹.

	Topic Areas	Summary of Content	
1.	Navigating the internet	This topic will present the TEs with a series of progressively difficult research tasks to get them comfortable with basic computer functionality and online research skills.	
2.	Online learning	This topic will provide the TEs with a structured environment in which to explore basic online learning sites. This will include static reference sites, interactive sites with in-built assessments and online teacher forums.	
3.	Mobile learning	This topic will introduce TEs to learning opportunities available on their own devices (smart phones or tablets). Again, this will include static reference sites, interactive sites with in-built assessments and online teacher forums.	

4.2 Phase 1 - Training of the trainers - Additional Module for those training TEs

In addition to these seven modules outlined above, if implementation is to be successful, those delivering these modules to TEs will also likely require training in the concepts and skills.

Professional development training will need to be delivered by a team of effective trainers. Because the curriculum material is new to most in the Myanmar education sector, this team has yet to be selected and trained. This training needs to be scheduled prior to the set of seven professional development modules listed above. It needs to cover all the training content as well as facilitation skills.

Due to the focus on modelling methodology, this training module will need to include significant time practicing facilitation and how to engender the new approach to constructivist teacher education.

4.3 Phase 2 – Long Term TE Training

This section on Phase 2 outlines a series of recommended on-going professional development modules. These are presented as suggested areas based on the data collected during the needs assessment research, workshops, and additional EC visits and literature review. These will need to be re-assessed at a later date to ensure that they still reflect current demand.

These modules can be delivered more flexibly than Phase 1 modules, and can be spread over an indefinite period of time, as their purpose is to sustain and up-date a TE's capacity in the longer term, rather than meet the immediate capacity development demands addressed in Phase 1. Phase 2 modules should be seen as future in-service training and, if deemed relevant going forward, contribute to an accredited certificate for Teacher Educators. This could be part of a Master's degree or a PhD.

⁵⁹ Each EC already has between two and three trained in-house ICT staff. These teachers would be well placed to provide this module on ICT proficiency. Smart phone and tablet training is important as the majority of Myanmar Internet users access the web through a smart phone.

There are four suggested modules in Phase 2. These focus on core skills: teaching practice, ICT, English language, and research.

Figure 4: Overview of the recommended Phase 2 modules



Module A: Effective Teaching Practice

To ensure TEs remain at the forefront of teaching practice, there should be on-going opportunities to improve and update their teaching practice. The content of this module needs to be demand driven, with demand dictated both by requests from TEs at a given point in time, and by global trends.

Module B: ICT for Teacher Educators

Although Myanmar may not yet appear a major ICT-connected society, over the next three to five years this will change, and it is important that the capacity to support ICT in education is in place.

The potential role of ICT in education is far reaching. Students themselves need to be taught ICT and therefore ICT will need to be a subject in its own right. Teachers however also need to have the competency and confidence to use ICT to support their own lessons. They need to learn how to integrate technology and the resources made available into their teaching-learning process. In addition, ICT opens up opportunities to support teacher training. The internet provides access to a host of teacher training resources for self-directed learning as well as access to teacher forums and communities, ⁶⁰ but in this CDP it is important to reference the importance of building the skills from TE level down.

In terms of professional development training, four key topics have been suggested under 'ICT for Teacher Educators'. These have been listed in order of suggested priority:

Topic	Summary of learning outcome

⁶⁰ The potential of ICT in education is covered in a previous STEM supported report- Review of ICT for Teacher Education in Education Colleges. Rapid Assessment Report of ICT in Education Colleges. Report 1: UNESCO STEM 2015

1.	ICT Proficiency	TEs have overall competence and confidence in basic ICT skills	
2.	ICT as a teacher	TEs capable of navigating and finding appropriate opportunities for	
	training resource	their own CPD, including online learning communities	
3.	ICT as a teaching	TEs capable of navigating and finding appropriate teaching-learning	
	resource	materials for their own lessons	
4.	ICT in the	TEs able to effectively integrate ICT into the teaching-learning	
	classroom	process in a classroom setting	

Module C: English for Teacher Educators

The rationale behind recommending English as a specific module in Phase 2 is twofold:

- English is an essential core skill of all student teachers. All student teachers have to learn how to teach English⁶¹.
 - For primary school teachers, English is one of the subjects they have to learn as part of the full Basic Education curriculum;
 - For middle school teachers, English is a core (compulsory) subject and English language a pre-requisite for teaching Maths (another core subject) and Science as both currently use English as the medium of instruction.
- English is the predominant language of the Internet. To be able to access the wealth of resources online or learn through online teacher training courses, TEs will need to be able to be proficient in English (reading and writing).

The design for this module should align with and compliment the work of the EfECT project, which has been delivering English language to TEs in all the ECs since 2014⁶².

Module D: Action Research for Teacher Educators

Teacher educators not only need to be at the forefront of education, but they need to be leading innovations. This recommended module could be part of a Master's or PhD programme as it encourages TEs to lead on education research. This concept builds on a philosophy seen in countries such as Finland and Japan, where individual or study groups of teacher educators play an active role in contributing to the wider knowledge base on education techniques, concepts, and quality through research projects conducted simultaneously to their teaching. The system therefore again integrates theory and practice, and ensures that theoretical study is informed by practice experience and vice versa. In these countries, where some of the highest performing education systems in the world are found, teachers and teacher educators need a minimum of a Master's degree and are recognised as not just deliverers within the education system, but as the designers responsible for the education system⁶³. The focus of this action research module should be on practice-research to support the integration of theory and practice⁶⁴.

⁶¹ The perceived importance of English proficiency is discussed in the British Council and Voluntary Service Overseas (2014). *Needs Analysis: English for Education College Trainers*, Myanmar

 $^{^{62}\} http://www.britishcouncil.org.mm/programmes/education/english-education-college-trainers-efect$

⁶³ UNESCO STEM Education College Curriculum Review p.46

⁶⁴ In Norway, the Ministry of Education and Research has started a research programme for teacher educators (PRAKUT), engaging them in practice-based educational research in close cooperation with schools. This programme is supported by a national graduate school in teacher education (NAFOL), where teacher educators can join PhD programmes. While supporting the development of teacher educators' research expertise, this initiative also contributes to the development of the knowledge base on teaching.

4.4 Performance indicators

Up-skilling of teacher educators will need to be a well-designed process that will take this CDP to the next level of operationalisation. As with any process, a monitoring and evaluation framework will be required to track and measure success in the TE up-skilling process. There is a need to have performance indicators to measure the improved capacity resulting from the professional development modules suggested above. Like with the Teacher Competency Standard Framework, (TCSF) these performance indicators need to relate to the expectations of teacher educators' knowledge, skills, and attributes across four domains⁶⁵.

- Professional knowledge and understanding
- Professional skills and practices
- Professional values and dispositions
- Professional growth and development

To be able to measure improvements, like the TCSF, each domain needs to be divided into relevant competency standards. A competency standard is a concise statement with accompanying descriptors of the expected minimum requirements to be achieved by all teacher educators⁶⁶. The performance indicators articulate how to measure whether that competency has been adequately demonstrated. Developing a competency standards framework for teacher educators as part of the capacity development process would clarify and quantify the precise performance standards required of a TE.In addition, a baseline assessment for developing such a framework would act as an automatic training needs assessment, as well as the design of a performance evaluation instrument. The same team that produced the TCSF would be well placed to complete the work of a similar framework specific for TEs – a Teacher Educator Competency Standards Framework (TECSF) – as part of the design and baseline for the TE professional development programme process. If the same curriculum team were to be engaged in this developing this framework, they would then naturally form the initial core members of a professional regulatory body which would be needed in the longer run⁶⁷, and could also be instrumental in setting up a centralised TERC⁶⁸ if such a roll out option were decided upon.

Many of the competency standards will be replicable across both the teacher and teacher educator competency standards frameworks, but teacher educators will need to be able to deploy competences on two levels⁶⁹:

- 1. First-order competences concern the knowledge base about schooling and teaching which teacher educators convey to student teachers as related to subjects or disciplines;
- 2. Second-order competences concern the knowledge base about how teachers learn and how they become competent teachers. They focus on teachers as adult learners, the associated pedagogy, and organisational knowledge about the workplaces of students and teachers.

⁶⁵ Each domain refers to "a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world, in a particular domain." European Commission (2013) *Supporting teacher competence development for better learning outcomes.* European – Education and Training.

 $^{^{66}}$ Para-phased from the definition provided in the *Draft Teacher Competency Standards Framework*, p. 7

⁶⁷ UNESCO STEM Education College Curriculum Framework p.21

 $^{^{68}}$ See Section 5 below

⁶⁹ European Commission, Supporting Teacher Educators p.15

Myanmar will have to review the quality of a number of international examples of teacher educator competency standards in order to decide how to move forward. There is a range of literature on TE competencies, which will need to be consulted, as well as a previous Myanmar draft TE framework supported by UNICEF. Examples of EU teacher educator guidelines, British Council teacher educator guidelines, and United States teacher educator standards are briefly considered below as resources that can be drawn on as a starting point for developing a full Myanmar TE Competency Standards Framework:

The **European Commission** teacher educator competency guidelines utilise the following framework for classifying competencies⁷⁰:

Competency areas
Knowledge development, research and critical thinking competences
System competences – i.e. managing the complexity of teacher education activities, roles and relationships
Transversal competences (for instance, decision making, initiative taking, entrepreneurship, team work)
Leadership competences (inspiring teachers and colleagues; coping with ambiguity and uncertainty)
Competences in collaborating, communicating and making connections with other areas

The **British Council** provides a Continuing Professional Development Teacher Educator Framework (CPD-TEF) ⁷¹, which, is used as a guide for the professional development of their teacher educators globally. It comprises a series of indicators for ten professional practices, seven enabling skills, and five attributes of self-awareness, as follows:

Professional Practices	Enabling Skills	Self-awareness features
Knowing the subject	Communicating effectively	Openness
Understanding the teaching context	Team working skills	Conscientiousness
Understanding how teachers learn	Thinking critically	Interactivity
Planning, managing and moderating teacher learning	Building relationships	Empathy
Managing and developing learning resources for teachers	Effective organisational skills	Resilience
Demonstrating effective teaching behaviour	Increasing motivation	
Supporting and mentoring teachers	Leadership/supervisory skills	
Monitoring teacher potential and performance		
Researching and contributing to the profession		
Taking responsibility for your own professional development		

The **Association of Teacher Educators (ATE)** in the United States⁷² uses nine Teacher Educator Standards, with suggested indicators, to measure TE quality as follows:

ATE Teacher Educator Standard	ATE suggested indicators	
1. Teaching:	 Model effective instruction to meet the needs of diverse learners Demonstrate and promote critical thinking and problem solving 	
Model teaching that demonstrates content and	among teacher educators, teachers, and/or prospective teachers	

⁷⁰ https://ec.europa.eu/education/policy/school/doc/support-teacher-educators en.pdf, p.15

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⁷¹ British Council, 2016, Continuing Professional Development (CPD) Framework for Teacher Educators, p. 4-10

⁷² http://www.ate1.org/pubs/Standards.cfm

ATE Teacher Educator Standard	ATE suggested indicators
professional knowledge,	Model reflective practice to foster student reflection
skills, and dispositions	Demonstrate appropriate subject matter content
reflecting research,	Demonstrate appropriate and accurate professional content in the
proficiency with	teaching field
technology and	Demonstrate a variety of instructional and assessment methods
assessment, and accepted	including use of technology
best practices in teacher education.	Mentor novice teachers and/or teacher educators
education.	 Facilitate professional development experiences related to effective teaching practices
	Ground practice in current policy and research related to education
	and teacher education
2. Cultural	Exhibit practices that enhance both an understanding of diversity and
competence	instruction that meets the needs of society
	Engage in culturally responsive pedagogy
Apply cultural	Professionally participate in diverse communities
competence and promote social justice in teacher	Model ways to reduce prejudice for pre-service and in-service
education.	teachers and/or other educational professionals
Caacationi	 Engage in activities that promote social justice Demonstrate connecting instruction to students' families, cultures,
	and communities
	 Model how to identify and design instruction appropriate to students'
	stages of development, learning styles, linguistic skills, strengths and
	needs
	 Foster a positive regard for individual students and their families
	regardless of differences such as culture, religion, gender, native
	language, sexual orientation, and varying abilities
	 Demonstrate knowledge of their own culture and aspects common to all cultures and foster such knowledge in others
	Promote inquiry into cultures and differences
	Teach a variety of assessment tools that meet the needs of diverse
	learners
	Recruit diverse teachers and teacher educators
3. Scholarship	 Investigate theoretical and practical problems in teaching, learning,
	and/or teacher education
Engage in inquiry and contribute to scholarship	Pursue new knowledge in relation to teaching, learning, and/or
that expands the	teacher educationConnect new knowledge to existing contexts and perspectives
knowledge base related to	Engage in research and development projects
teacher education.	Apply research to teaching practice and/or programme or curriculum
	development
	Conduct programme evaluation
	 Acquire research-based and service-based grants
	Disseminate research findings to the broader teacher education
	community
	Engage in action research Contempt in the second participation and putterness
4. Professional	Systematically assess learning goals and outcomes Systematically reflect on even practice and learning.
4. Professional Development	 Systematically reflect on own practice and learning Engage in purposeful professional development focused on
Developilient	Engage in purposeful professional development focused on professional learning goals
Inquire systematically	Develop and maintain a philosophy of teaching and learning that is
into, reflect on, and	continuously reviewed based on a deepening understanding of
improve their own	research and practice
practice and demonstrate	 Participate in and reflect on learning activities in professional

ATE Teacher Educator Standard	ATE suggested indicators
commitment to	associations and learned societies
continuous professional	Apply life experiences to teaching and learning
development.	The substitute of the substitu
5. Programme	Design, develop, or modify teacher education programmes based on
Development	theory, research, and best practice
	 Provide leadership in obtaining approval or accreditation for new or
Provide leadership in	modified teacher education programmes
developing,	 Lead or actively contribute to the on-going assessment of teacher
implementing, and	education courses or programmes
evaluating teacher education programmes	Provide leadership that focuses on establishing standards for teacher
that are rigorous,	education programmes or on developing, approving, and accrediting
relevant, and grounded in	teacher education programmes at the local, state, national, or international level
theory, research, and best	Contribute to research that focuses on effective teacher education
practice.	programmes
6. Collaboration	Engage in cross-institutional and cross-college partnerships
33	Support teacher education in the P-12 school environment
Collaborate regularly and	Participate in joint decision making about teacher education
in significant ways with	Foster cross-disciplinary endeavours
relevant stakeholders to	Engage in reciprocal relationships in teacher education
improve teaching,	Initiate collaborative projects that contribute to improved teacher
research, and student	education
learning.	Acquire financial support for teacher education innovation to support
	collaboration
7. Public Advocacy	 Promote quality education for all learners through community
	forums, activities with other professionals, and work with local policy
Serve as informed,	makers
constructive advocates for	Inform and educate those involved in making governmental policies and resolutions at least least and formational least a suggestion.
high quality education for all students.	and regulations at local, state, and/or national levels to support and improve teaching and learning
un students.	Actively address policy issues which affect the education profession
8. Teacher	
	• • • • • • • • • • • • • • • • • • • •
Profession	·
	education organisations
Contribute to improving	Review resources designed to advance the profession
	Develop textbook or multimedia resource for use in teacher
profession.	education
	Recruit promising pre-service teachers
	Recruit future teacher educators
	· .
	- · · · · · · · · · · · · · · · · · · ·
9 Vision	
3. VISIUII	· · · · · · -
Contribute to creating	=
_	
learning, and teacher	
education that take into	Actively pursue new knowledge of global issues
account such issues as	Support innovation adoption with research
technology, systemic	Relate new knowledge about global issues to own practice and K-12
Education Profession Contribute to improving the teacher education profession. 9. Vision Contribute to creating visions for teaching, learning, and teacher education that take into account such issues as	national, or international level Edit/review manuscripts for publication or presentation for teacher education organisations Review resources designed to advance the profession Develop textbook or multimedia resource for use in teacher education Recruit promising pre-service teachers Recruit future teacher educators Mentor colleagues toward professional excellence Design and/or implement pre-service and induction programmes for teachers Support student organisations to advance teacher education Advocate for high quality teacher education standards Actively participate in learning communities that focus on educational change Demonstrate innovation in the field of teacher education Demonstrate qualities of an early adopter of technology and new configurations of learning Actively pursue new knowledge of global issues Support innovation adoption with research

ATE Teacher Educator Standard	ATE suggested indicators
thinking, and worldviews.	classroom teaching

Other examples of teacher educator standards include those developed by private sector organisations such as GEMS Education who have developed their own assessment standards for training professional development trainers⁷³.

Assessment against these performance indicators should reflect the same assessment approach as proposed in the draft EC Curriculum Framework⁷⁴. The draft EC Curriculum Framework proposes a competency-based assessment, which focuses on practical demonstrations through observations and portfolio work.

In suggesting indicators for the TE up-skilling process in Myanmar, frameworks such as the British Council's or ATE's could be adopted or revised to match the context. Following the key areas of TE competency highlighted by this CDP, the areas of "Demonstrating Effective Teaching Behaviour" and "Supporting and Mentoring Teachers" from the British Council could be relevant, for example:

Demonstrating Effective Teaching Behaviour – Example Indicators

Competence in teacher professional practices, especially understanding learners, managing lessons, planning lessons and assessing learning.

Competence in relation to self-awareness.

Competence in relation to enabling skills, especially communicating effectively and thinking critically.

An understanding of the professional context in which teachers work in order to demonstrate practical teaching solutions.

An explicit articulation of how language, learning and assessment theories translate into pedagogical choices and classroom practice.

Familiarity with a current range of pedagogic techniques, including incorporating new technologies in the learning process.

An explicit analysis and articulation of the processes involved during specific demonstrations of classroom practice and professional behaviour.

Congruence with own teaching and behaviour during teacher learning activities being facilitated.

Demonstrating commitment to educational values and professional behaviour.

Researching, reflecting on, and assessing the impact of one's own demonstrations of effective teaching behaviour.

Supporting and Mentoring Teachers – Example Indicators

Providing advice to teachers on:

- the location of sources of information relating to teacher development
- the different developmental pathways, courses and qualifications available, including the transition from teacher to teacher educator
- the range of professional developmental activities available.

Demonstrating familiarity with current research into, and practice of, mentoring.

Assessing, and encouraging teachers to assess, their developmental needs.

Encouraging teachers to establish professional development objectives and long-term career

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⁷³http://www.gemseducation.com/organisation/training-and-development/professional-learning-and-development/train-the-trainer/

⁷⁴ UNESCO STEM Education College Curriculum Framework p.52

goals.

Promoting action research, self-reflection, the recording of professional development activities and their outcomes, and action planning.

Responding to concerns raised by teachers.

Providing advice on classroom practice.

Organising opportunities for teachers to observe and be observed.

Promoting learning strategies.

Encouraging teachers to collaborate with colleagues in their institution.

Contributing to institutional programmes of induction and the integration of teachers into their professional context.

Encouraging teachers to share practice through participation in national and international teaching networks/forums/associations.

Promoting professional behaviour, respect, responsibility and identity amongst teachers.

Increasing teacher motivation and confidence by creating an environment of trust.

Assessing and encouraging teachers to assess their progress and development in relation to student attainment and their own professional satisfaction.

Helping teachers to reflect on their attitudes to the change process.

Researching, reflecting on and assessing the impact of own support and mentoring of teachers.

5 RECOMMENDED PROFESSIONAL DEVELOPMENT DELIVERY OPTIONS

This section suggests three different options to inform decision-making on how best to deliver the professional development modules. It provides an analysis of each to help inform the decisions needed to implement this capacity building component of the large-scale change programme. The options and recommendations are informed by a number of contextual considerations and an analysis of international examples of TE professional development delivery models.

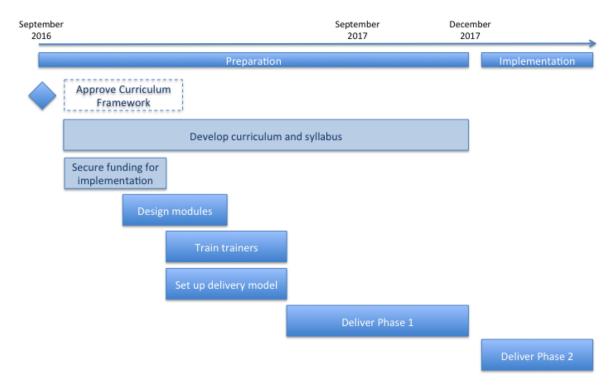
5.1 Contextual considerations

In designing the delivery models, a number of contextual issues have been taken into consideration. It is important to bear these in mind when deciding on the most appropriate option.

Accelerated/urgent timeframes:

The criticality of improving learning outcomes in schools is reflected in the urgency of the MoE's proposed timeframe of introducing the draft EC Curriculum Framework in December 2017.

Figure 5: Indicative timeframe to illustrate urgency in finalising decisions to meet December 2017 start date



One approach to reduce the time-pressure and avoid the potential risk of compromising the quality of the curriculum reform would be to introduce the draft EC Curriculum in phases. This could include introducing the changes to TEs in a small number of pilot ECs. This would allow for:

- A controlled environment to test the new content, processes, and requirements
- A focus on the quality rather than quantity of delivery
- A phased teacher supply mechanism; increasing teacher education by two years will mean that teachers will graduate two years later. If all ECs start using the new EC Curriculum at the same time, there will be no graduates to meet the demand for teachers during that

time. A phased approach would help manage the supply but raises the question of how to manage the existing diploma graduates during the transitory period (lower status/lower salaries) and how to select the ECs.

To balance these considerations, a three-batch approach for the training of TEs in the new EC Curriculum is recommended:

- Batch 1: Pilot in four ECs
- Batch 2: Scale up in ten ECs
- Batch 3: Scale up in remaining ECs

Time constraints of TEs

Currently, the TEs do not have much spare time, and concerns were raised during the needs assessment about taking long periods of time out of the ECs' schedules⁷⁵. It will be important to reconsider the TEs' non-academic duties, which seemingly take up much of their time (domestic duties, security, attending events, etc.). However, where possible the delivery models have taken time constraints into account.

Need for continuous professional development

Although there is an urgency in meeting the immediate skill requirements to implement the draft EC Curriculum Framework, as seen in the previous section there is an equally important on-going need for continuous professional development. Also outlined in the previous section, this CDP therefore proposes a two-fold approach whereby Phase 1 focuses on the immediate needs, and Phase 2 focuses on the longer-term development needs. This dual requirement may require a dual approach to delivery.

Budget considerations

In designing the delivery options for the TE training modules, this report takes a conservative approach to the budget, and where possible have provided lower-cost versions. The budget for this capacity development plan is not yet clarified and therefore providing these options allows for flexibility.

5.2 Analysis of international examples of TE professional development delivery models

The recommended professional development delivery options are informed by an analysis of international examples of how TE professional development is delivered. The following section provides a brief review and reflection on training teacher educators (pre-service and in-service) and the different models and approaches.

One of the key findings of the research was that the role of the teacher educators worldwide and their need for professional development has often been overlooked:

"Although several studies highlighted the need for training teacher educators, the review did not identify many studies looking specifically at how teacher educators are trained, how they develop their own practice and PCK over time, or how they develop a community of practice

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⁷⁵ UNESCO STEM Needs Assessment p.12

through collaboration in networks and individual and collective reflection, highlighting a visible research gap." 76

The literature states that it is only in the last 20 years that there has begun to be an interest in the role of the teacher educator. The argument for this increasing interest is the close link with the increasing recognition of the *teacher* as the most important input to improved learning outcomes:

"Teacher educators are crucial players for maintaining – and improving – the high quality of the teaching workforce. They can have a significant impact upon the quality of teaching and learning in our schools." ⁷⁷

A small number of studies and publications on teacher educators are now available. These look at clarifying the role of a teacher educator, what is expected of them, and how they should best be supported through professional development training.

One such example is a recent European Commission (EC) study of teacher educator professional development in 26 member states,⁷⁸ and includes an exploration on how teacher educator professional development is being delivered in these countries. The study concludes that professional development needs more investment. Teacher educators are often recruited based on their prior experience in either academic or practical teaching and more often than not, do not receive any pre-service type training or induction into their role, as highlighted by this finding that, "initial courses of preparation to become a teacher educator are not available in any EU country."⁷⁹

In-service trainings (continuous professional development) do exist, but vary widely. The different approaches identified in the study are listed below⁸⁰:

- **Traditional workshop approaches:** require a limited investment of time, can cover a wide variety of themes, and can be scheduled in or out of working hours⁸¹.
- Degree programmes: aim to raise teacher educators' level of qualifications but can be costly
 in terms of time and money, since teacher educators are often offered a sabbatical to
 complete their dissertation work⁸².
- Collaboration in networks for curriculum innovation or practice-oriented research: an informal professional learning arrangement, which often crosses boundaries between different institutions (such as schools and universities)⁸³.
- Sharing practice: an informal learning arrangement such as a community of practice (including virtual environments) that includes support to observing each other's classes and

⁷⁶ Westbrooke et al. p.29

⁷⁷ European Commission, Supporting Teacher Educators p.4

⁷⁸ European Commission (2013) *Supporting Teacher Educators,* Thematic Working Group 'Teacher Professional Development', Education and Training Department, EC.

⁷⁹ European Commission, *Supporting Teacher Educators* p.22

⁸⁰ The above is paraphrased from the EC study but further research shows that similar approaches are being used globally, for example, in Malaysia, Australia, Israel, US

⁸¹ For example, in the UK, the Teacher Education Advancement Network (TEAN) organises an annual workshop on 'Becoming a Teacher Educator'; in The Netherlands the Teacher Educator Academy provides a series of one day and half day workshops.

⁸² For example, in Sweden, all teacher educators have a PhD.

⁸³ For example, a number of countries or group of countries have teacher education or professional associations- Association of Teacher Educators (ATE) in the US, Association of Teacher Educators, Europe (ATEE)

- exchanging feedback, co-construction of curricula, and learning arrangements for student teachers.
- **Self-regulated learning:** requires high quality resources to be available, which can consist of national and international conferences for teacher educators, national and international journals, books, and web resources.

As can be seen from the list above, the majority of approaches are more informal and in many cases self-managed. The exceptions to this are the degree programmes; these are most common in the Scandinavian countries (especially Norway, Sweden, and Finland).

Even for the more informal approaches, the universities or relevant education institutions themselves play an important role in delivering professional development. A popular concept is the notion of a 'resource centre' which brings together many of the professional development models listed in the EC study. A resource centre is often a central point bringing together resources, hosting workshops and trainings, providing a venue (physical or virtual) for knowledge sharing, and supporting a network of learners⁸⁴. In some cases, resource centres are specifically for teacher educators, but in general they support teacher education in general and span both pre-service and in-service training needs of teacher educators and teachers. During the workshop in Yangon on Teacher Professional Development organised by STEM, the concept of a resource centre was raised by several participants. It was not clear where the participants had heard about this concept, but when asked for suggestions on 'one thing that would improve the Myanmar Education System', this was found to be one of the most pertinent responses and was raised numerous times during the workshop⁸⁵.

The following are some international examples of a resource centre being deployed for teacher educator education:

- In **The Netherlands**, the Ministry of Education has created several 'Centres of Expertise' for teacher education, focusing on subject didactics and teacher learning. These centres of expertise are connected to specific universities, but they have a national role.
- In **St Kitts and Nevis**, the Ministry of Education implemented a Teacher Resource Centre in 2012. The Ministry state that the mission of the centre is to provide support to teacher educators and schoolteachers in the form of resource materials and training workshops relevant to enhancing the skills set of teacher educators and student teachers. In addition, their Teacher Resource Centre is purported to promote curriculum implementation and encourage displays of exemplary work by teacher educators. ⁸⁶
- In Australia, the University of Melbourne (UoM) has a Centre for the Study of Higher Education (CSHE). This conducts research and professional development in the field of higher education teaching and learning, research, engagement and leaderships and management. Their resources include, a framework for teaching, curriculum design (including interdisciplinary curricula), guides for reviewing assessment, e-learning and feedback on teaching. The CSHE is first and foremost for the educators at the UoM, however, their resources are available online for a wider audience. The CSHE also run professional development programmes both internally and to the public including Advanced Skills for Sessional Teachers and Foundations of Student Advising.⁸⁷

⁸⁷ University of Melbourne (2016) Centre for the Study of Higher Education, Melbourne, Australia

⁸⁴ See *The Effectiveness of Teacher Resource Centre Strategy – Education Research Paper No. 34, DFID 1999* for numerous case studies.

⁸⁵ UNESCO (2016) Teacher Professional Development Workshop Outcomes Report, p. 12, 13

 $^{^{86}}$ Ministry of Education (2012) Teacher Resource Centre – Homepage, St Kitts and Nevis

- In **Germany**, Heidelberg University offers an independent Teacher Resource Centre, which is designed to link all aspects concerning teacher training. Objectivity is a key benefit of the centre as it enables Teacher Resource Centre staff to offer professional advice on coursework and subject matter throughout the duration of their studies⁸⁸. The key responsibilities of the Centre are to counsel student teachers and provide advice to departments offering teacher training. In addition, the Centre establishes contacts with other independent Teacher Resource Centres across Germany to share ideas and information on how to provide the best advice for teacher training.
- In **Bangladesh**, the EU funded a resource centre specifically for training female teacher educators⁸⁹. This was set up in an existing education college but provided a safe training environment to up-skill women teachers.

Another popular model that again brings together resources, workshops and trainings, knowledge sharing and a learning network is the notion of *professional associations*. In the United States, there is an Association of Teacher Educators (ATE) that provides professional development workshops and defines standards. In Europe, the Association of Teacher Educators Europe (ATEE) plays a similar role. There are also examples of country specific professional associations such as VELON in the Netherlands. This association is affiliated with the University of Amsterdam and funded by the Ministry of Education.

Associations can play relevant roles not only in providing professional development of teacher educators but also in:

- Development of frameworks for professional quality
- Quality assurance through the maintenance of a professional register
- Development and sharing of knowledge through research, publications and conferences
- Contributions to national policies on teacher education⁹⁰

In other countries, such as Scotland, Thailand, and the Philippines, these tasks are undertaken by a Teaching Councils or Professional Teaching Bodies.⁹¹

A different approach to delivering professional development is demonstrated by the work of the British Council who provide professional development to their teacher educators globally. Their approach, which they have also implemented in Myanmar though the EfECT programme (referred to in previous sections)⁹², is to place a professional development trainer within a teacher education institution, which in Myanmar's case is within each Education College:

"Our teacher trainers and mentors are not based in teaching centres, but are located in schools and teacher training colleges working with trainee or qualified teachers to develop their English language proficiency and/or teaching knowledge and skills." ⁹³

⁸⁸ Streitenberger, E (2015), *Centre for Teacher Education: Home-page*, University of Heidelberg, Germany.

⁸⁹ The EU funded 'Programme to Motivate, Train, and Employ Female Teachers in Rural Secondary Schools' (PROMOTE) was established in 2004

⁹⁰ European Commission, Supporting Teacher Educators p.32

⁹¹ UNESCO STEM Education College Curriculum Review p.34

⁹² A recent review of the EfECT Programme has been conducted by Dr Marie Lall of the UK Institute of Education (IoE) in London, and is positive in its findings. However, it cannot be quoted here as it is not yet officially published.

⁹³ https://www.britishcouncil.org/jobs/careers/english/teacher-trainers-mentors

The research demonstrates how, other than the formal degree programmes, the examples of professional development approaches are self-directed and self-managed (collaboration, sharing learning, and self-regulated learning). This highlights the importance of professional learning communities and peer support. Professional learning communities are becoming a key learning tool amongst teachers. These are both physical communities, for example 'Quality Circles' in Jamaica⁹⁴ or virtual communities online, such as through Twitter.⁹⁵

Online professional development is now a critical component of teacher education.

"It has been championed as the 'anytime, anywhere' option that provides flexibility by allowing participants, irrespective of location, to manage educational pursuits with work and personal responsibilities. Born out of a need for professional development that fits with the busy schedules of teachers, online professional development provides access as well as ongoing support to important resources that might not otherwise be affordable or even available locally." ⁹⁶

The same principles could be applied to teacher educators.

Professional development modules from well-renowned universities such as Harvard and Stanford are now easily and freely accessible through Massively Open Online Courses (MOOCs). In some cases, the completion of these modules can result in credits contributing towards a qualification. These have become increasingly popular in regards to the training expectations associated with teacher licencing. A good example of an education focused MOOC is 'EdX' which provides a single source for accessing multiple different professional development modules⁹⁷. There are also a range of options for institutions to develop their own online professional development modules through applications such as 'Moodle'⁹⁸ or organisations such as 'Educational Impact.'⁹⁹

The benefits of online professional development not only include the 'anytime, anywhere' options but also the quality of resources made available. Access to training videos is a good example promoted in the literature. Access to training videos allows teachers and teacher educators a time and cost effective way to observe teaching styles and reflect on specific practices.

Online opportunities do not necessitate that all learning is online. In some cases, complete courses can be delivered at distance. For example, in the UK there are now options to complete a full PGCE (Post-Graduate Certificate in Education) online. There are however many examples of 'blended learning' — when learning is split between some online learning and some offline learning. For example, a three-week teacher educator programme starts with a week of online preparation work, followed by a week of face-to-face learning, and concludes with a week of online follow-up work. The cost of the three-week training is therefore significantly reduced and the learners have more flexibility in how to manage their work load as they only need to be away from their full time work for 33 per cent of the training period. 100

A summary table of some further international models in provided in Annex 1.

⁹⁴ Jamaica, which has recently set up a Teaching Council, has created a Quality Circles system which is a structured approach to communities of practice at teacher level See http://itc.gov.jm/

⁹⁵ https://www.good.is/articles/why-twitter-is-a-teacher-s-best-tool

⁹⁶ http://files.eric.ed.gov/fulltext/EJ991837.pdf

⁹⁷ https://www.edx.org/course/subject/education-teacher-training

⁹⁸ https://moodle.org

⁹⁹ https://www.educationalimpact.com/courses.html

http://www.oxfordtefl.com/oxford-tefl-courses/teacher-development/training-the-trainer

5.3 Option 1: Teacher Educators Resource Centre (TERC)

This delivery option looks at introducing a Teacher Educators Resource Centre (TERC). A TERC would be a central entity responsible for designing and producing material for the TEs professional development modules and for providing train the trainer workshops and advice. The concept of a TERC was initiated in the Yangon workshop. The TERC could be based in a new building or could be based within an existing EC as a self-contained annex. There could be one single TERC or one responsible for Upper Myanmar and one for Lower Myanmar, both reporting directly to the DTET/DHE.

The TERC would be managed by a small cohort of professional staff. These staff would need to be experienced educationalists (possibly retired successful educators or township education officers, or seconded successful primary or middle school teachers). Their full time role would be in researching and developing professional development support to keep teacher educators up-to-date with teaching practices. The staff would have the opportunity to undertake study trips and, where needed, specialist staff can be brought in on consultancy contracts.

At EC level, the TERC would operate with and through an appointed Teacher Educator Professional Development (TE PD) Coordinator, whose job it would be to coordinate and deliver the trainings organised by the TERC. To enhance the coordination between the central and local level and create effective knowledge sharing, communities of practice comprising multiple ECs, could be developed so that TEs can learn from the experience of their colleagues, both inside and outside their own ECs.

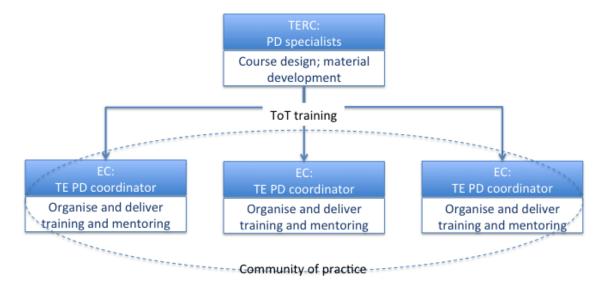


Figure 6: Option 1: TERC- Functional Chart

The benefits of using the TERC model for preparing TEs for the proposed EC Curriculum Framework include the following:

By developing a centralised resource, the focus is on developing consistent high quality training modules. A small team of highly qualified staff will be responsible for researching and developing relevant modules best on a clear evidence base of best-practice.

^{*}This would be for all Ecs; this illustration shows only 3 ECs as an example of the design

- Acting as a train the trainer institute, the TERC would deliver the modules through a decentralised mechanism which can be both time and cost efficient and flexible to TEs schedules.
- It is easy to establish as the TERC could use existing premises and can share utilities and support staff.
- It could easily be adapted and extended to become a Teacher Educator and Education Leadership Centre. School and College Leaders are vital integral parts for maintaining education quality.
- It could form the basis or a component part of a professional regulatory body¹⁰¹ that would:
 - Register all teachers
 - Establish professional standards
 - Monitor and evaluate the performance of teachers
 - Build and maintain competencies by:
 - **Establishing Teacher Resource Centres**
 - Establishing an online library
 - Advancing use of technology in schools
- As also mentioned previously, the one constant request that was made by TEs at the workshops was for such a TERC to be set up. 102 This indicates that the system will be respected and welcomed by TEs.

5.4 Option 2: In-college trainers

This delivery option looks at having a professional development trainer (or trainers) based in each of the ECs. This decentralised model is similar to the delivery model used in the British Council/VSO funded EfECT programme described in Section 5.2. A recent review of the EfECT programme demonstrated good outcomes. 103

This model option suggests have a training expert in each of the ECs to provide the professional development support needed. The trainer (or trainers) would live within the college or nearby, and would be available to deliver a series of short training sessions each week.

Due to the need for local acceptability, trust, and ease of communication, it is recommended that the trainers appointed to each EC should be high-calibre Myanmar nationals, well-trained in the concepts and methodologies of the new curriculum, and ideally from the locality of the EC to which they are posted. If a current TE was identified in each EC who met the requirements, they could be trained as the trainer and would have the responsibility of training their colleagues, though the political economy of such situations would need to be taken into account before proceeding.

The four key benefits of this model are:

- The training expertise would be in-college
- The training sessions would be scheduled to fit around the TEs' teaching timetable; TEs' busy year-round schedules are recognised as one of the constraints to introducing professional

¹⁰¹ Examples of Teaching Councils or Professional Teaching Bodies include GTC Scotland, Ireland, Australia, New Zealand, Jamaica, and Philippines. These bodies run on-going upgrade courses for teacher trainers.

¹⁰² UNESCO (2016), Teacher Professional Development Workshop Outcome Report

 $^{^{103}}$ A recent review of the EfECT Programme has been conducted by Dr Marie Lall of the UK Institute of Education (IoE) in London, and is positive in its findings. However, it cannot be quoted here as it is not yet officially published.

- development. This option offers a potential solution to TEs spending multiple or significant periods of time outside of their EC and unable to take classes.
- TEs would have frequent training sessions with periods of real practice in-between to help develop the new habits needed to improve teaching.
- Having a full-time trainer on campus would mean that trainings could be delivered in small class sizes. Small class sizes will allow the TEs more time to practice in front of each other as well as the opportunity to receive more direct feedback from the trainer.

The potential challenges of this model relate to potential resource constraints: cost and space. This model would require a trainer in each EC (currently 22) and there would need to be the space to accommodate training classrooms onsite. With current EC infrastructure this could pose a problem, as generally ECs comprise a small number of large rooms rather a larger number of smaller rooms, which offer flexibility.

Another version of this delivery option would be to have a team of trainers rotating between a geographic cluster of ECs. They could spend a period of time in an EC delivering a series of module topics as needed, and then move on to the next EC before returning to the first EC for subsequent training. This would reduce the cost, and although it would reduce the frequency of the trainings, would allow TEs to focus and master specific skills before moving on to the next skill. However, this version is only appropriate if there is a sufficient period of time to deliver the modules.

Adopting this model does not address who designs courses, designs and produces training materials, supplies competent trainers, or organises logistics. In this model, the assumption is that these will remain a centralised task under DHE/DTET.

5.5 Option 3: Blended learning

This third delivery option looks at a blended learning model. 'Blended learning' is where the 'content' component is delivered through a package of self-study materials including 'online' and 'offline' activities, such as printed reading materials, videos and electronic exercises on a CD, and internet hyperlinks, and then put into practice in study groups within the ECs. The expertise is therefore delivered through a scalable learning package without the practical element of the personal development being lost. Assessment of the learning outcomes would include some online assessments, but the majority would be through demonstrations of competencies in the study groups.

The study groups would be managed through a Teacher Educator Professional Development (TE PD) coordinator in each EC (similar to Option 1).

A key benefit of this model it that it is easily scalable, as the direct cost is product-based rather than a cost per head. A potential challenge to be considered is the availability of sufficient Internet connectivity for the e-learning activities. These activities would depend on the availability and use of existing EC computer labs, which are operational, but would also encourage mobile-learning (when electronic learning materials can be developed and shared with learners by smart phone) as TEs become more used to using smart phones.

To be most appropriate, the e-learning packages would be designed not to be over reliant on the quality Internet connectivity. The modules would be divided into manageable units, each covering the topic areas listed, and accompanied by offline materials to be used in conjunction with the materials available online through mobile phones.

The DFID funded 'English in Action' (EIA) programme in neighbouring Bangladesh has utilised mobile phones for teacher training purposes for over five years, with 28 million beneficiaries reached to date. EIA utilises a similar approach with offline resources for teachers being developed and distributed alongside mobile phone course content. A similar programme could be considered for Myanmar TEs and teachers in future.

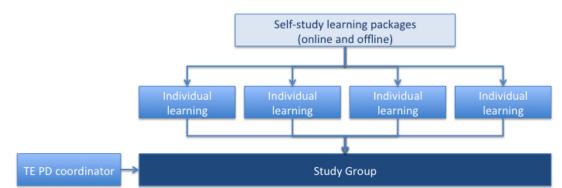


Figure 7: Option 3: Blended Learning Functional Chart

5.6 Recommended Option: Hybrid

The consultancy team recommend that the MoE consider a hybrid option incorporating the strongest components of the three options to meet the urgent capacity development needs and then sustain the professional development needs going forward.

- Establish a TERC for research and materials development. This would provide a centralised
 point for ensuring quality and ensuring Myanmar plays a role in education research and
 innovation. As part of a longer-term strategy the TERC could be used as the foundation of
 professional regulatory body.
- Place a professional development expert in each EC the Phase 1 modules in order to equip the TEs with the prioritised skills.
- Equip ECs with the infrastructure to manage a blended learning approach to deliver on-going professional development trainings in a sustainable manner.

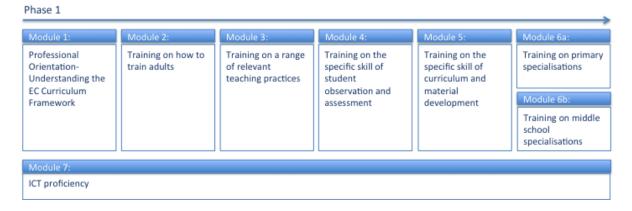
¹⁰⁴ http://www.eiabd.com/eia/index.php/abouts/about-eia

6 SUMMARY OF THE CAPACITY DEVELOPMENT PLAN

Planning schedule – phased approach:

- Phase 1: Pre-launch preparation (from start date 2016 until Dec 2017)
 The period between anticipated start date in 2016 and the launch of the draft EC Curriculum Framework will be critical in terms of preparing TEs and ECs.
- Phase 2: Post Launch (2018 onwards)
 A robust, continuous professional development programme of short courses on topics that have been (and will be) identified as training needs

The tables below provide a summary of the Phase 1 modules: those modules recommended in the short term to meet the immediate up-skilling required for the draft EC Curriculum Framework.



TE Module 1:

Module Title	Rationale	Content (*compulsory)	Duration	
Professional Orientation - understanding the EC Curriculum Framework	This is a foundational module to be completed at the beginning of training programme. The purpose of this module is to ensure TEs have a sound understanding of the concepts. The Curriculum Review, Needs Assessment, and workshops all indicate that, while TEs are generally in favour of the new framework, they do not understand enough about the modalities that teaching it will necessitate. The aim of this module is to educate TEs in this understanding.	 Rationale for introducing the draft Curriculum Framework Teacher Competency Standards Framework Competency-based curriculum Integrated curricula Constructing knowledge Formative assessment Aligning with the Basic Education Curriculum 	56 hrs (7 days)	
Participants	All EC professional personnel; all TEO	s and ATEOs; selected MoE personnel		
Location	Education College			
Timing	Preparation Period 2016-17			
Method	Option 1: Materials prepared by TERC. Facilitated by TE PD Coordinator Option 2: Delivered by college based PD professional Option 3: Self -study with e-learning programme. Facilitated TE PD Coordinator			

TE Module 2:

Module Title	Rationale		Content (*compulsory)	Duration
Effective	Currently the TEs have no training in	1.	Adult learning techniques	16 hours in
Training of	how to teach adult learners; their	2.	Self-motivation and self-	total
Adults	experience is predominantly focused		directed learning	(2 days)
	on learning in schools. The purpose of			
	this short module is to equip TEs with			
	the techniques needed to provide age-			
	appropriate training to adults.			
Participants	All TEs			
Location:	Education College			
Timing	Preparation and Post-Launch Period 2016-17; 2017 Onwards			
Method	Option 1: Materials prepared by TERC. Facilitated by TE PD Coordinator			
	Option 2: Delivered by college based PD professional			
	Option 3: Self -study with e-learning programme. Facilitated TE PD Coordinator			

TE Module 3:

Module Title	Rationale	Content (*compulsory) Duration		
Effective Teaching Practice	This comprehensive series of individual topics provides the main skills identified. The purpose is to ensure TEs are equipped and confident in the critical skills needed to deliver the four-year degree course. Many of these topics are not new to the TEs and will be designed to build on and strengthen existing knowledge and practices. They are listed in order of priority starting with the most complex and unknown to the most familiar, or those skills more relevant to the second cycle of the curriculum e.g. research methodologies.	 Deconstructing knowledge into basic concepts Enabling active participation to support learning outcomes Developing relevant teaching-learning materials Adapting lesson delivery to specific scenarios Adapting lesson delivery to different learners Creating environments that encourage questioning Managing classrooms Self-reflection on their own practice Reflection and dialogue Research methodologies 		
Participants	All TEs	<u> </u>		
Location:	Education College			
Timing	Preparation and Post Launch Period 2016-17; 2017 Onwards			
Method	Option 1: Materials prepared by TERC. Facilitated by TE PD Coordinator Option 2: Delivered by college based PD professional Option 3: Self -study with e-learning programme. Facilitated TE PD Coordinator			

TE Module 4:

Module Title	Rationale		Content (*compulsory)	Duration
Effective	The Needs Assessment research	1.	Simulating classroom	48 hours in total
Student	indicated skills in student teacher		environments and	(6 days)
Observation	management, observation, and		facilitating micro-teaching	
and	assessment require upgrading.	2.	Lesson observations:	
Assessment			developing lesson	
	These skills will be critical to the		observation checklists	
	success of the integrated curriculum	3.	Assessing student teachers'	
	that is planned for the 4YD course,		practice against competency	
	particularly as that curriculum will be		standards	

	competency led and performance will be measured against pre-set performance standards. Also very few primary TEs have actually taught in a primary school The purpose of this module is to ensure TEs are able to develop effective observation checklists, define and assess student teachers against learning competencies and provide constructive feedback 4. Providing constructive feedback to student teachers 5. Preparing for practicum 6. Mentoring student teachers 4. Providing constructive		
Participants	All TEs (and those responsible for supervising practicum)		
Location:	Education College		
Timing	Preparation and Post Launch Period 2016-17; 2017 Onwards		
Method	Option 1: Materials prepared by TERC. Facilitated by TE PD Coordinator		
	Option 2: Delivered by college based PD professional		
	Option 3: Self -study with e-learning programme. Facilitated TE PD Coordinator		

TE Module 5:

Module Title	Rationale	Content (*compulsory)	Duration
Effective Curriculum and Material Development	The purpose is to ensure TEs are equipped and confident in the critical skills needed to deliver the four-year degree course. This topic is relatively new to the TEs and will be designed to build on and strengthen existing knowledge and practices in order to build the skills needed to develop curriculum independently.	Curriculum development: basic framework Subject material development: basic design skills and design processes	32 hours in total (4 days)
Participants	All TEs		
Location:	Education College		
Timing	Preparation and Post Launch Period 2016-17; 2017 Onwards		
Method	Option 1: Materials prepared by TERC. Facilitated by TE PD Coordinator Option 2: Delivered by college based PD professional Option 3: Self -study with e-learning programme. Facilitated TE PD Coordinator		

TE Module 6:

Module Title	Rationale	Content	Duration	
Demonstrating age-appropriate pedagogies a) Effective Primary school teaching b) Effective Middle school teaching	In the draft EC Curriculum Framework, student teachers will specialise in either Primary or Middle School in year 2 of study. Methods and approaches in the classroom will vary according to the age of pupils. The course will address the issues that are related to pupils, age and development.	Module 6a: 1. Primary school ageappropriate pedagogical content knowledge 2. Primary school ageappropriate teaching methods 3. Early literacy and numeracy Module 6b: 1. Middle school age-	Module 6a: 72 hours in total (9 days) Module 6b: 80 hours in total	
		 appropriate pedagogical content knowledge 2. Middle school ageappropriate teaching methods 3. Remedial literacy and numeracy 4. Subject specialisation revision 	(10 days)	
Participants	All TEs but either Module 6a or 6b dep	ending on specialisation		
Location:	Education College			
Timing	Preparation and Post Launch Period 2016-17; 2017 Onwards			
Method	Option 1: Materials prepared by TERC. Facilitated by TE PD Coordinator Option 2: Delivered by college based PD professional Option 3: Self -study with e-learning programme. Facilitated TE PD Coordinator			

TE Module 7:

Module Title	Rationale	Content	Duration
ICT proficiency	Up-skill TEs in being confident in using ICT for further work-related activities. This is important in enabling TEs with the skills to continue with self-directed learning.	 Navigating the internet Online learning Mobile learning 	[Iterative programme delivered through Phase 1]
Participants	TEs and EC management who are not y	vet proficient	
Location:	Education College		
Timing	Preparation and Post Launch Period 2016-17; 2017 Onwards		
Method	Option 1: Materials prepared by TERC. Facilitated by TE PD Coordinator Option 2: Delivered by college based PD professional Option 3: Self -study with e-learning programme. Facilitated TE PD Coordinator		

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ANNEX 1: INTERNATIONAL EXAMPLES OF TEACHER EDUCATION MODELS

The table below provides additional references to international examples of teacher education models. This was used to inform Section 5.2.

Country	Model	Established
Singapore	National Institute of Education Vision: Creating a world-class Institute of distinction renowned for excellence in teacher education and education research. Trategic goals: Preparing the next generation of teachers. Developing new and innovative ways of learning, which informs and impacts on Singapore's education policies and practice, keeping it in the forefront of global education systems. Upgrading the quality of teachers and developing world-class school leaders through responsive professional development programmes. Functions: Pre service teacher education Continuous professional development courses Education research	Developed from the Teachers Training College established by the Singapore Government in 1950. Originally trained teachers who gained a Diploma in Education.
Malaysia	Ref: http://www.nie.edu.sg/about-us/corporate-information Institute Aminuddin Baki, Ministry of Education Independent training institution for the entire Ministry of Education	Established in 1979 by the Malaysian
	 Strategic goals: To consolidate the training needs analysis of continuous staff development in the educational service. To upgrade the planning and implementation of training programmes to develop the competencies of all educational service staff. To increase the number of impact studies and research. To upgrade writing and publications to international levels to enrich the collection of best practice. 	Government following a report to the cabinet committee review of education policy in Malaysia
	 Functions: Long term, short term and high competency training courses Assessment Consultation and research Ref: http://www.moe.gov.my/en/profil-jabatan?div=17 	

Jordan



Queen Rania Teacher Academy (QRTA)

QRTA has created a set of professional development programmes that build professional learning communities in schools that reinforce and continue developing the lessons of in-service training.

QRTA raises the quality of teaching in Jordan by developing the skills of teachers through continuous training and professional development. QRTA draws on the expertise of their educational partners, Columbia University Teachers College and Columbia University Middle East Research Centre, to raise the quality of teaching in Jordan.

Ref: http://www.qrf.org/initiative/queen-rania-teacher-academy

A nongovernmental organisation established in 2009 that is affiliated with the Queen Rania Foundation for Education and Development (QRF).

Egypt



Professional Academy for Teachers

Offers several programmes to instruct teachers in order to raise mathematics, science, and technology teaching standards. Local teachers also take part in the international professional training programmes.

- Functions:
 - Support professionalisation of educators
 - Support and deliver professional development
 - Develop and manage teacher licenses
 - Build and accommodate technical and advisory resources and capacity
 - Develop teacher performance indicators and evaluation systems

Established in 2007 as part of the Ministry of Education responsible for granting licenses and "validity certificates."

Ref: http://academy.moe.gov.eg/

United States of America



Carnegie Academy For Teaching and Learning

- Aims to ensure evidence based teaching strategies are delivered in the classroom
- Supports the critical analysis and investigation of classroom practice by pioneering uses of information technology to allow examples of teaching and learning to be readily shared, critiqued, discussed and built upon.

Ref: http://www.carnegiefoundation.org/who-we-are/

Established in 1998

by the Carnegie Foundation. The foundation is an independent policy and research centre.

United Kingdom

National College for Leadership of Schools and Children's Services (original title)

- Vision: Inspiring leaders to improve children's lives
- Strategic goals:
 - Inspiring new leaders
 - Providing leadership development
 - > Empowering successful leaders
 - > Shaping future leadership
- Functions:
 - Leadership courses and qualifications
 - Research
 - Leadership library
 - Regional and online networking

https://www.gov.uk/government/organisations/national-college-for-teaching-and-leadership

Established in 2000 by the UK Government to develop school leadership.

South Africa



TEACH Training Academy

- Vision: To recruit, train and support the most talented recent university graduates to commit to teaching for a minimum of two years in some of South Africa's most disadvantaged schools.
- Aim: To help solve the teacher shortage in South Africa, particularly in disadvantaged areas.
- Provides 4 weeks of training for graduates before they work in schools as Ambassadors. This is followed by a three week Summer School which offers TEACH Ambassadors the opportunity to gain essential teaching experience under supervision, prior to entering the classroom.

Independent
Academy operating
from 2009. Funded
by donations and
business
sponsorship.
Service used by
three regions that
pay the salaries of
the Ambassadors.

 $Ref: \underline{http://www.teachsouthafrica.org/training-academy/}$

Oman



Specialised Centre for Professional Teacher Training

The specialist centre for vocational training of teachers seeks to raise the achievement levels of students by offering professional strategy training programmes in co-operation with the institutions of international experience in the preparation and design and follow up on the implementation, impact and evaluation of the training programmes:

- Mission: Develop highly skilled, confident and motivated educators by providing sustained, intensive, accredited professional development.
- Achieve impact by working with all schools and a high proportion of teachers and regional officials.
- Sending a clear message to the profession and the wider public that improvements are a priority by providing and reporting high status, high profile developments and achievements.

Ref: http://omanobserver.om/specialised-centre-to-train-teachers-launched

Established in 2014 as a semi-independent Centre within the Ministry of Education and working with international education partners such as CfBT, IoE and the Finland University.

Australia



University of Melbourne, Masters of Teaching Programme

- Prepares a new generation of teachers as interventionist practitioners with high-level analytical skills and capabilities to use data to diagnose and meet the needs of individual learners.
- Delivers an innovative curriculum linked to a partnership model with selected schools.
- Ensures support is delivered both in school and by the Institution.
- Offers differentiated programmes for Early Years, Primary and Secondary teachers.

http://education.unimelb.edu.au/study with us/courses/beco me a teacher

Master degree programme developed by the University.

United Kingdom



The College of Teachers

Originally established by Royal Charter as an independent body for the profession in 1847. The College of Teachers has expressed 'its belief that teaching as a profession has reached an important point in its history, and a new professional body for teaching should be created by a broad alliance of interests of which this College would be one.'

http://www.collegeofteachers.ac.uk/

Following a 2010 White Paper on The Importance of Teaching, and a national consultation on 'the vision for a world class teaching profession' there have been increased calls for an independent body to take on a wider remit for the development of the profession.

Ref: http://www.claimyourcollege.org/

To be confirmed