

EDUCATION COLLEGE CURRICULUM REVIEW

STRENGTHENING PRE-SERVICE TEACHER EDUCATION IN MYANMAR (STEM)

UNESCO, SEPTEMBER 2016



montrose

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ACROYNMS

ATEO	Assistant Township Education Officer
B.Ed.	Bachelor of Education
CESR	Comprehensive Education Sector Review
C.TEd	Certificate in Teacher Education
CPD	Continuous Professional Development
DHE	Department of Higher Education
DTET	Department of Teacher Education
D.TEd	Diploma in Teacher Education
D.TEC	Diploma in Teacher Education Competency
DWT	Daily Wage Teacher
EC	Education College
EfECT	English for Education College Trainers
ICT	Information and Communication Technologies
IoE	Institute of Education
JAT	Junior Assistant Teacher
JICA	Japan International Cooperation Agency
MoE	Ministry of Education
NEL	National Education Law
PAT	Primary Assistant Teacher
PPTT	Pre-Primary Teacher Training
SAT	Senior Assistant Teacher
STEM	Strengthening Pre-service Teacher Education in Myanmar
TCSF	Teacher Competency Standards Framework
TE	Teacher Educator
TEO	Township Education Officer
TOR	Terms of Reference
VSO	Voluntary Service Overseas
UDE	University of Distance Education
UDNR	University of Development of National Races
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
UoE	University of Education

EXECUTIVE SUMMARY

A curriculum framework is ‘a document (or set of documents) that sets standards for curriculum and provides the context (available resources, capabilities of teachers and system support) in which subject specialists develop syllabi’.¹ It describes the education environment required and overarching learning objectives to guide *what* is being taught and *how* it is being taught. In Myanmar there is *not* yet a documented curriculum framework for any of the courses delivered in the Education Colleges (EC).

The purpose of this report is to determine what elements of a curriculum framework exist and assess what improvements are needed to strengthen the quality of *what* is being learned and *how* it is learned.

To this end the following report provides:

- **A review of the existing curriculum documentation** used for teacher training in the Education Colleges (ECs). This includes identifying gaps in current EC training programmes which link directly to the lack of a curriculum framework and to determine where improvements can be made. The definition of curriculum documentation has been used resourcefully for this review, as there is limited documentation available. The main source of teaching direction is through textbooks, therefore these are a key source of material for the review. The D.Ted curriculum has been selected for the review because this is the most comprehensive teacher education course offered in an EC.
- **A comparative analysis to learn from international examples** of teacher education systems and current educational trends and reforms.
- **A framework of recommendations to inform the design of the curriculum frameworks;** for the improvement of EC facilities across Myanmar with the goal of raising the overall quality of Myanmar’s school system and student learning outcomes.

A curriculum framework is made up of several component parts. For the structure of this review, a framework promoted by the United Nations Educational, Scientific, and Cultural Organisation’s (UNESCO) International Bureau of Education (IBE) has been used. Each component-part has been assessed in the context of the existing D.Ted curriculum documentation and in regards to international best practice. The findings from the assessment have been used to develop a list of recommended options to inform discussion around the development of two frameworks. The first looks at how to update the existing two-year diploma and the other proposes how to introduce a four-year degree. The concept of a four-year degree is being discussed as a strategy to upgrade the quality and status of Myanmar’s primary and middle school teachers.

The review findings reveal a number of structural and methodological areas that need to be addressed to strengthen student teacher training. The following tables summarise the key findings along with the recommended options for improvement.

Summary of key findings and the related recommendations:

Educational Policy Statements	
Summary of key review findings	There is no teacher education policy in Myanmar that defines specific goals and expectations of the teacher education system. The National Education Law (2014) is currently the main documented directive.

¹http://www.ibe.unesco.org/fileadmin/user_upload/COPs/Pages_documents/Resource_Packs/TTCD/sitemap/Module_3/Module_3_1_concept.html

<p>Recommendations informed by international best practice</p>	<ol style="list-style-type: none"> 1. A teacher education policy should be introduced based on national aspirations for the development of its human capital. If trained effectively, new teachers will make a lasting impact on their students; the impact of this will multiply as the next generation of teachers and students grow in experience and establish their contributions to national development. 2. Clear teacher education goals that acknowledge and incorporate the realities of current schooling in Myanmar and the national development agenda should be set in line with national priorities
<p>Considerations</p>	<p>The transition from the old government to the new will likely involve a period of flux and reorganisation. The potential impacts of this fluidity should be anticipated.</p> <p>Key documents to consider: National Education Law (2014)- amended 2015; 30 Year Education Plan (2001 to 2031); Framework for Economic and Social Reforms (FESR) (2012-15)</p>

<p>Statement of Broad Learning Objectives and Outcomes</p>	
<p>Summary of key review findings</p>	<p>There are currently no formalised statements of learning objectives however, the Basic Education curriculum framework (2015) provides a temporary basis while the curriculum for Basic Education undergoes a reform and the MoE is currently drafting a teacher competency standard framework. There are also prescribed objectives for the ECs.</p> <p>There is no designated regulatory body responsible for designing or assuring teacher-specific standards. This weakens accountability to meet prescribed standards.</p>
<p>Recommendations informed by international best practice</p>	<ol style="list-style-type: none"> 1. The learning objectives and outcomes need to reflect the national objectives (which needs to be prescribed at policy level). This needs to be reflected in what is taught in Basic Education schools and in the teacher education curriculum. 2. Teachers need a set of agreed learning objectives and outcomes to provide a structure to their learning. This should span pre-service and in-service training 3. The current EC objectives should be updated to reflect the current reforms towards modernising the education system. These should be common standards shared between the EC and the University of Education. 4. A regulatory body is needed to define and assure standards that connect what is being taught in schools (the basic education curriculum) to the training teachers receive.
<p>Considerations</p>	<p>Key documents to consider:</p> <ol style="list-style-type: none"> 1. Draft Teacher Competency Standards 2. Basic Education Curriculum Framework 3. Education College objectives

<p>Structure of the Teacher Education System</p>	
<p>Summary of key review findings</p>	<p>A two-year training course is too short a time period to adequately equip a high school graduate with the knowledge, skills and attitude needed in a classroom.</p>

	<p>The lack of a degree-level qualification for primary and middle school creates a hierarchy within the different education levels, with high school teachers highly regarded and better paid. This 'ladder system' undermines teaching quality in primary school.</p> <p>There are no linked continuing professional development opportunities.</p> <p>Having one Ministry department responsible for Basic Education schools and another for teacher education creates an operational fissure that undermines opportunities for teachers to practice.</p>
<p>Recommendations informed by international best practice</p>	<ol style="list-style-type: none"> 1. As per the policy level discussions, a four-year degree-level qualification for primary and middle school is being proposed. The different education levels should be recognised as equal in status and should be reflected in pay and promotion. This will raise the status of teachers and importantly it will prevent the loss of experienced teachers from primary and middle schools through the current system of 'upward' promotion (ladder system). 2. A four-year course will align Myanmar's teaching profession with international standards. 3. The agreed learning objectives and outcomes (aligned to the Teacher Competency Standards) should be used as the framework to link pre-service training and continuous professional development opportunities (in-service training). 4. The Teacher Education Policy should be used as the policy mechanism to regulate activities across Ministry departments. The DBE should have a focal person solely assigned to support ECs interact with schools. 5. Introduce entry requirements for the degree-level course to raise the calibre of applicants (currently the entry-level for the diploma is passing matriculation).
<p>Considerations</p>	<p>Care needs to be taken to ensure that the increased length of pre-service training does not create a teacher deficit.</p> <p>Implications on the current bridge programme and whether this will affect teacher numbers at High School level.</p>

<p>Structure of curriculum content, learning areas and subjects</p>	
<p>Summary of key findings</p>	<p>There are no options to specialise; this means teachers cannot develop expertise in a particular age-level, subject or niche.</p> <p>The academic subjects are primarily to prepare student teachers for later degree-level study rather than for classroom. They expect an advanced level of comprehension beyond what is required for a primary and middle school teacher. This extraneous agenda overcrowds the curriculum and compromises methodology and 'teacher readiness'.</p> <p>Inadequate management and monitoring of 'bloc teaching' (practicum) denies student teachers the opportunity to gain practical experience.</p>
<p>Recommendations informed by international best practice</p>	<ol style="list-style-type: none"> 1. Specialist track options should be offered for primary and middle school teachers. This will ensure teachers are trained effectively in age-appropriate content and pedagogy. As teaching becomes increasingly learner-centric, pedagogies need to

	<p>target learners’ specific needs. Specialisation will also decongest the overcrowded curriculum.</p> <ol style="list-style-type: none"> 2. Student teachers should have the option to study specific subjects. The subject choices on offer should tie in with national aspirations such as increasing the number of language specialists or science teachers. The choices on offer should also be demand led with electives offered based on specific subject matter that teachers need in a particular state/region. 3. The current subject areas should be re-structured in order to emphasise that the main purpose of a college is to instruct teachers how to teach in a classroom setting. 4. Student teachers should have more supervised opportunities to put theory into practice before they start their careers. 5. New and more flexible modes of integrating practicum should be introduced in the diploma and the degree. This should include short-term placements in local ‘partner schools’. 6. The assessment system should be restructured to focus on competencies through assessment of practical demonstrations.
Considerations	<p>Care needs to be taken to ensure that the increased length of pre-service training does not create a teacher deficit.</p> <p>Creative ideas are needed in how to create the space and motivation necessary for a deeper level of reflection and engagement.</p> <p>Additional workload in developing a level-specific curriculum framework, content and instructional materials.</p> <p>Implications of specialisation training on post-primary schools (Grade 1-8), which might require an additional mixed programme.</p>

Standards of resources required for implementation	
Summary of key findings	<p>There is a missed opportunity in helping create ‘teacher readiness’ by underutilising the EC’s existing practicing schools and making use of the local schools in the surrounding community.</p> <p>The textbooks are used as more than just a functional learning reference, and in the absence of a documented curriculum they also provide the teaching structure.</p>
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. Integrating learning opportunities using the practicing schools should be introduced 2. There should be a re-examination of the role of textbooks and the extent to which trainers/teachers should be developing their own materials. 3. Teacher educator instructional material aimed at teaching adult learners should be developed. These materials should directly reflect the learning objectives laid out in the teacher education curriculum framework. Emphasis should be on more interactive and reflective lessons, with instructional material including more activities, problem-solving worksheets and formative assessment techniques.

	<ol style="list-style-type: none"> 4. The textbooks need to align and be developed alongside the Basic Education curriculum reforms. The textbooks should use real example lessons from the Basic Education curricula. 5. The teaching learning resources should be expanded to include textbooks, detailed teacher educator guides and supplementary materials such as reference books, worksheets, or templates and if possible augmented by other media, such as audio or video. 6. Academic textbooks should be in a language relevant to what supports the most effective learning in the classroom. The language needs to be understood by the students in order to reduce time spent translating in the classroom.
Considerations	<p>Logistics of how to increase student teacher time in practicing schools without compromising quality of teaching for the pupils.</p> <p>The language and mode of delivery of relevant course content.</p>

Training methodology	
Summary of key findings	<p>There is a good level of integrating grade-specific content with age-appropriate methodology in the training and co-curricular subjects. This is not evident in the academic subjects.</p> <p>The dominant teaching style is lecture-based which restricts learning to ‘knowledge transmission’</p> <p>The congested curriculum and overcrowded classrooms compromise the methodology.</p>
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. The curriculum should be decongested by: offering specialisation, reducing the compulsory subjects, extending duration to a four-year programme (as mentioned above). 2. Moving from a ‘knowledge transmission’ model to an ‘active engagement’ model and incorporating higher order thinking and interactive teaching strategies 3. The time made available should be used to enhance the student teachers time for: <ol style="list-style-type: none"> i) Self-reflection ii) Teaching demonstrations and micro-teaching iii) Classroom practice and observation time in practicing and partner schools

Assessing student teacher achievement	
Summary of key findings	<p>The knowledge transmission-based teaching approach results in a focus on assessing retention of knowledge, rather than its application.</p>
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. Development of clear lesson objectives 2. Development of success criteria and assessment for learning activities 3. The formative assessment techniques to inform choices and activities in the classroom 4. Practices such as portfolio-work where students can learn and reflect on good pedagogical practice should be introduced

5. Introducing a course-end competency-based assessment should be explored internally as part of the EC assessment system. This would help assure quality standards and provide a link to on-going in-service training.

This report is the first phase of a multi-phase consultancy looking at curriculum reform in Education Colleges in Myanmar. The consultancy is one component of UNESCO's 'Strengthening Pre-service Teacher Education in Myanmar' (STEM) programme. Subsequent phases of the consultancy include developing the two curriculum frameworks (a two-year diploma and a four-year degree), trialling specific aspects of a new curricula and proposed professional development modules and assessing the capacity building requirements for teacher educators.

In any curriculum reform it is critical to include key stakeholders in the process, especially those who will deliver the curriculum – in this case the teacher educators (TEs). The reforms will depend on the TEs having an understanding of the rationale behind the changes and a sense of ownership over the new concepts being introduced. To this end an EC Curriculum Core Team (CCT) has been set up as a participatory mechanism to discuss policy-level concepts and potential challenges and opportunities. The CCT comprises two selected representatives from each of the ECs.

Methodology of the Curriculum Review

The following tasks were undertaken to complete this review:

- A review of the 2014 published D.TEd textbooks
- A review of previous analysis of D.TEd textbooks carried out by UNESCO and JICA
- An analysis of previous research carried out in Myanmar's Education Colleges
- Site visits to four education colleges (Hlegu, Sagaing, Pakkoku and Dawei) to conduct
 - Key informant interviews with Principals and Vice Principals
 - Focus group discussions with Heads of Departments and teacher educators
 - Lesson observations
- Research and comparative analysis of Myanmar's current teacher education system against international examples
- Research and analysis of international trends in teacher education, improving learning outcomes and curriculum reform
- A two-day consultation workshop (9-10 February 2016) on the key findings of the review and initial recommendations. This Yangon-based workshop was attended by 44 participants; comprising all members of the EC Curriculum Core Team, national advisors and staff from Yangon University of Education.

References for previous research analysed during the review:

- *Rapid Assessment of Myanmar Teacher Education (Phase 1); Comprehensive Education Sector Review (CESR)*, Myanmar, Khin Zaw, Dr (2013)
- CESR: Phase 1 (2013)
- CESR: Phase 2 (2013)
- *Teacher Education*, Ota, Miho. (2013)
- *Secondary Teacher Education and Continuing Professional Development Report*, Young, M. (2013)
- *Teacher Education Review*, Redden, E. (2007)
- *Development of a Teacher Education Strategy Framework Linked to Pre and In-Service Teacher Training in Myanmar*, Hardman, F. et al. (2013)
- *Teachers' Voice: What Education Reform does Myanmar Need?* Lall, M. (2013)
- *A Study of the Comprehensive Assessment of Selected Educational Colleges in Myanmar*, Ogawa, Keiichi and Team. (2013)
- *English for Education College Trainers Needs Analysis*, British Council and Voluntary Service Overseas (2014)

Full references for each are included in the 'References' section at the end of the report.

References for research and analysis of international trends in teacher education, improving learning outcomes and curriculum reform

- *What makes great teaching? Review of the underpinning research*. The Sutton Trust (2014)
- *Authentic assessment of teaching in context. Teaching and Teacher Education* Darling-Hammond, L., & Snyder, J. (2000)
- *Teachers make a difference: What is the research evidence?* Hattie, J. (2003)
- *Educating school teachers* Levine, A. (2006)
- *How the world's best performing school system come out on top*, McKinsey and Co. (2007)
- *Building a High Quality Teaching Profession; Lessons From Around the World*, OECD (2011)
- *Those who understand: Knowledge growth in teaching*. Educational Researcher. Shulman, L. S. (1986)
- *Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries*. Westbrook, J. et al., (2013)
- *What matters most in teacher policies?* World Bank (2012)
- *An investigation of best practice in evidence-based assessment within pre-service teacher education programs and other professions*, Queensland College of Teachers (2012)
- *A Comparative Survey of Teacher Training in Selected ASEAN States*: Yeban, F. I. (2005)

Full references for each are included in the 'References' section at the end of the report.

1. OVERVIEW OF MYANMAR’S TEACHER EDUCATION SYSTEM

1.1. Background to the teacher education system

Teachers are acknowledged as being the most important school level input to quality education.² The Ministry of Education (MoE) in Myanmar, recognising the critical role of teachers, has prioritised teacher education as a key reform. The current education system has suffered from a significant period of underinvestment. Education reforms, such as this initiative to reform the curriculum framework, are fundamental in rebuilding what was once a well-respected education system.

In the first half of the twentieth century, Myanmar had one of the highest literacy rates in the region. There was a strong state-school system and a number of private institutions. Yangon University, which was founded in 1920, provided a teaching diploma for high school teachers. A faculty of education was set up in Yangon University in 1922 and the first teacher training college in 1931.

However, during the Socialist era (1962-88, there was little investment in education. In 1965 education was nationalised and Myanmar language replaced what had previously been English, as the medium of instruction in all schools. Teachers saw their salaries decrease and teacher education became limited. Universities were closed down for long stretches of time over fears of student revolts. Between 1978/9 and 1997/8 there was no pre-service training; new teachers had to have a degree but there was no pre-requisite teaching experience or teacher training.

The 1990s saw a renewed interest in education reform. The most relevant for this report was the introduction of the ‘21 Methodologies’ for use in teacher training; a list of 21 suggested teaching methods and activities. In 1998, a new policy³ was introduced and pre-service training was re-instated. Amongst other reforms, the policy upgraded the five teacher-training colleges and 14 teacher training schools to Education Colleges (ECs) and established the ‘ladder’ based system of promotion. This promotion system is where teachers train initially as primary assistant teachers (PATs), and are then promoted up to junior assistant teachers (JATs) in middle schools, and then to senior assistant teachers (SATs) in high school. This policy directive on promotion was reiterated in the Ministry’s 30 Year Plan (2001-2031).

The current EC curriculum also dates back to 1998. In the last 18 years, a few modifications have been introduced but the fundamentals in terms of structure, content and delivery model remain in place. In 2007 a study was carried out in ten ECs.⁴ The study identified a number of challenges, many of which have not yet been fully addressed. The same issues were raised in the Comprehensive Education Sector Review (CESR), the Ministry’s recent sector-wide reform programme (2012-2016). The final phase of the reform programme, developing the National Education Strategic Plan (NESP) resulted in 12 sub-sector strategic plans outlining policies and programmes for 2016-2021. One of the twelve plans focuses on teacher education.⁵ The reports and all the supporting research highlight the need to improve teacher’s quality. In terms of improving pre-service training, they all recommend decongesting and upgrading the teacher education curriculum framework.

² <http://visible-learning.org/hattie-ranking-influences-effect-sizes-learning-achievement/>

³ It is not clear whether there is an actual 1998 policy document, but other than the policy directives suggested in the recent EPIC, this is seen as the most recent policy to date.

⁴ Redden, E. (2007). Myanmar Teacher Education Review. Myanmar: UNICEF

⁵ At the time of writing, the NESP has yet to be approved by the MoE

Teacher education in Myanmar is delivered through three types of institution:

- Two Universities of Education (UoE) provide a five-year degree (B.Ed.) qualifying teachers to teach in secondary school. These were upgraded from Institutes of Education (IoEs) in early 2015 in line with international trends. The fifth year was recently added to include a year of research.
- One University of Development of National Races (UDNR) provides free teacher training specifically to ethnic minorities.⁶
- 22 Education Colleges currently provide diploma-level courses qualifying teachers to teach in primary and middle school. The most recent EC, opened in December 2015, is in Loikaw, Kayah State. There are plans to open another EC in Shan State and one in Chin State, which is the only State/Region currently without an EC. The timing of these two openings remains unclear.

This review is concerned with the curriculum for future primary and middle school student teachers, which is why it is solely focused on the curriculum delivered in the ECs. At present, the ECs offer a range of different courses but the Diploma in Teacher Education (D.TEd) is the most comprehensive and the only course currently open to high school graduates. The full range of course options available differs between ECs across the country. The table below provides an overview of what these courses include⁷:

Table 1: Summary of different teacher education courses

Name	Qualification status	Length	Mode of delivery	Entry requirement	Number of subjects
Diploma in Teacher Education (D.TEd)	Teach middle school and below	2 years	College based	High school matriculation	Y1: 17 Y2: 18
Correspondence Course (PATC) in selected ECs	Teach primary school	1 year	Distance learning with one month EC-based	Degree holder	8 subjects (only Y1 training subjects)
Pre-service Primary Teacher Training (PPTT)	Teach primary school	6.5 months	College based	Degree holder	8 subjects (only Y1 training subjects)
Short-term courses for daily wage teachers (DWT) ⁸	Teach primary school	1-month course	College based	Degree holder ⁹	8 subjects (only Y1 training subjects)

⁶ This university is run by the Ministry of Border Affairs and uses a similar curriculum to the UoEs but includes additional ‘special co-curricular’ subjects: traditional medicine, martial arts and military training. It awards Master (in Education and in Philosophy), B.Ed. and teacher training diploma.

⁷ Up until 2014, ECs also offered a one-year Certificate in Teacher Education (C.TEd), which provided the Y1 diploma curriculum, and qualified new teachers for primary school level only.

⁸ Daily wage teachers (DWTs) were introduced in 2014 to address the critical teacher deficit and meet the policy of having a minimum of five teachers in every primary school. Initially these were delivered through a train the trainer programme at township level but the one-month course is now delivered through the ECs. To date, daily wage teachers account for approximately 25% of the teaching force (72,000 teachers). The concern raised in relation to this course is that 25% of teachers have minimal training in how to teach; their focus is only on content.

⁹ In order to place teachers in the hardest to staff areas, this pre-requisite of being a degree holder has been lower to having just a matriculation certificate.

The Department of Teacher Education and Training (DTET) within the Ministry of Education is responsible for all aspects of teacher education.¹⁰ The two other Ministry departments involved in teacher education are the Department for Higher Education (DHE) and the Department for Basic Education (DBE). The distinct roles of the three departments are briefly outlined in the table below¹¹:

Table 2: Distinct roles of departments within the Ministry of Education

Ministry Department	Role in Teacher Education
Department of Teacher Education and Training (DTET)	Responsible for the Education Colleges and managing the practising schools
Department for Higher Education (DHE)	Responsible for the two Universities of Education (UoEs) The Board of Studies at the Yangon UoE is also responsible for supporting curricula development
Department for Basic Education (DBE)	Responsible for all government schools and therefore responsible for coordinating school-based bloc training placements

1.2. Overview of recent reforms of the teacher education system

Through the CESR and other initiatives there has been much research into how to address the current gaps in the education system. Within teacher education, teacher quality, the teacher deficit, and teacher status are identified as priority areas in need of reform. This review, which looks at what and how student teachers are taught, is predominantly focused on teacher quality but the three areas are inexorably linked.

- **Teacher quality:** Improving teacher education is acknowledged as the most critical input in improving effective learning.¹² There is limited data on learning outcomes to date, but a study in 2010 found that the majority of primary school completers had mastered only 50% of the curriculum competencies for Myanmar language and Mathematics.¹³
- **Teacher deficit:** The proposed education reforms include an additional year of kindergarten and Grade 12. This will significantly increase the number of pupils in the system at one time and therefore the demand for trained teachers. The teacher education reform therefore needs to look at remodelling training opportunities to become more responsive and flexible to systemic changes.
- **Teacher status:** To attract and retain good teachers the status of all teachers, regardless of education level needs to be improved. Current reforms are looking to revise the promotional system; align teacher salaries to the civil service pay-scales; and re-assess initiatives such as the 2014 ‘daily wage teacher’ scheme which implied that anyone could become a teacher with just one month of training.

Teacher education is a crosscutting component of the education system and it is important that the reforms are assessed within this broader context. As the education reforms are still under discussion, this review will refer to the proposed reforms as working assumptions. The main government directive used for this review is the National Education Law (September 2014; amended in 2015).

¹⁰ Prior to the Ministry restructure in April 2015, it was the responsibility of the Department of Educational Planning and Training (DEPT). Under the current restructure this may change again.

¹¹ It should be noted that this is still current at the time of this report but the new government are proposing a restructure to the MoE departments.

¹² Hattie, J (2003) *Teachers make a difference: What is the research evidence?* Australian Council for Educational Research Annual Conference on Building Teacher Quality, University of Auckland: New Zealand

¹³ Vine, K. (2010). *Quantitative Study of Child Friendly School Implementation in Myanmar*. UNICEF: Myanmar

In addition to the policy discussions underway, a number of Development Partners involved in the reforms through the CESR have already started working in collaboration with the MoE to address the urgent reforms needed in teacher education. These look at both pre-service and in-service training and the basic education reforms (kindergarten through to high school) and provide important context for this review. A high-level summary of current teacher education related initiatives and the relevant Development Partners can be found at Annex 1.

2. WHAT IS A CURRICULUM FRAMEWORK?

A curriculum framework is ‘a document (or set of documents) that sets standards for curriculum and provides the context (available resources, capabilities of teachers and system support) in which subject specialists develop syllabuses’.¹⁴ It describes the education environment required and overarching learning objectives to guide *what* is being taught and *how* it is being taught. The curriculum framework is the foundation from which to design the curriculum and related syllabuses.¹⁵

The curriculum framework for teacher education describes the structure and objectives needed to teach student teachers *what* and *how to teach*. It is a different and separate document from the Basic Education curriculum framework. However, the two need to directly align as they both share the end-goal of providing effective learning outcomes for school children.

A curriculum framework will be important to ensure that the ECs have the direction needed to consistently produce high quality teachers. It outlines the content structure (the ‘what’) and the methodology (the ‘how’) to meet the demands and expectations of the national objectives. Having a framework in place is vital during periods of reform because it provides an outcome-focused framework from within which to respond, reflect and structure change.

In Myanmar there is *not yet* a documented curriculum framework for any of the courses delivered through Education Colleges. During the research for this review, when the EC management team and teacher educators were asked how they knew what to teach, they only referenced the Ministry of Education issued textbooks; there is no documented course curriculum. One EC (Pakkoku) did mention a curriculum guidance document dating back to 1998 when the current textbooks were introduced but this document no longer seems to be available.

However, although there is no documented curriculum framework or course curriculum, the high-level concept of both is taught in the First Year Education Theory textbook. It does not mention the term ‘curriculum framework’ but refers to the hierarchy of needing a set of educational objectives to direct the development of a curriculum and then a syllabus¹⁶:

- Goal of the State or Policy of the State
- Educational Objectives
- Curriculum
- Syllabus

¹⁴ Working definition of the term curriculum framework is taken from: Stabback, P. What Basic Education for Africa? Kigali, Rwanda – 25-28 September 2007 Discussion Paper for Session 3 – Final Version Guidelines for Constructing a Curriculum Framework for Basic Education p.3

¹⁵ The development of the subject specific teacher education curriculum and syllabi is therefore not included in this phase of the curriculum reform. This latter phase will need to build directly on the curriculum framework once it has been agreed on and will entail a larger-scale project bringing in teams of subject specialists.

¹⁶ Excerpt from Education Theory First Year Textbook

A curriculum framework needs to reflect the objectives and needs of a country's national-level policies. Therefore, curriculum frameworks must differ country to country but in general they cover similar content areas. The main difference is often the level of detail. For this review, an adapted version of a UNESCO International Bureau of Education (IBE) model has been used. This model was designed as part of a training tool to support national level curriculum reforms. It is made up of the eight core components. These are outlined in Table 3 below.¹⁷

Table 3: Overview of the UNESCO IBE Curriculum Framework model

1. Introduction: Current Context	Reflects the findings of the contextual scan. It describes the social and economic environment in which teaching and learning occur
2. Educational Policy Statements	Describes the Government's goals for education, such as universal literacy and numeracy, the development of skills needed for economic prosperity and the creation of a stable and tolerant society
3. Statement of Broad Learning Objectives and Outcomes / standards for each level/cycle	Describes what student teachers should know and be able to do when they complete their teacher education. Outcomes should be expressed in a range of domains, including knowledge, understanding, skills and competencies, values and attitudes
4. Structure of the Teacher Education System	Describes the system within which the curriculum framework is to be applied. It should specify the number of years of schooling, including compulsory schooling, stages (or cycles) of schooling and their durations and number of weeks in the school years, hours or teaching periods in the school week
5. Structure of curriculum content, learning areas and subjects	Describes the organisation of content within the framework and the extent to which colleges and students can make choices. It might describe: <ul style="list-style-type: none"> • The pattern of subjects or learning areas to be studied in each stage or cycle (such as core, elective and optional subjects) • A brief description of each subject or learning area outlining the rationale for its inclusion in the curriculum and the contribution it makes to the achievement of the learning outcomes defined in Section 3 • The number of hours to be assigned to each subject or learning area in each stage or cycle
6. Standards of resources required for implementation	Describes standards as they apply to: <ul style="list-style-type: none"> • Teachers – qualifications, teaching load (number of classes per week) • Students – number per class in each subject • Materials – textbooks, computers, other equipment; facilities – classrooms, furniture, fittings.
7. Teaching methodology	Describes the range of teaching approaches that might be employed in the implementation of the framework
8. Assessing student achievement	Describes the importance of assessing the extent to which students achieve the outcomes established for each subject, and recommends or prescribes types of assessment strategies (such as written, oral, performance and practical skills demonstration)

¹⁷ The curriculum framework structure is based on a UNESCO-IBE model developed in 2007 by Stabback. Philip Stabback is the author of *What Makes a Quality Curriculum? Current and Critical Issues in Curriculum and Learning* (2016)- a useful support document on curriculum reform. This model formed the basis of Module 3 UNESCO-IBE's training tool for curriculum reform. Full details of the training tool can be access here:

http://www.ibe.unesco.org/fileadmin/user_upload/COPs/Pages_documents/Resource_Packs/TTCD/sitemap/Module_3/Module_3_1_concept.html

3. REVIEW OF EXSITING CURRICULUM DOCUMENTATION

This section provides an in-depth review of the current documentation relating to the D.TEd curriculum, the current two-year diploma offered in ECs.

The purpose of this section is to ascertain what elements of a curriculum framework already exist and to assess where improvements are needed to strengthen the quality of *what* is being learned and *how* it is learned.

To this end, the components of the curriculum framework described above in Table 3 have been used to structure the review. The following discussion therefore looks at¹⁸:

- Educational policy statements
- Statement of overarching learning objectives and outcomes
- Structure of the teacher education system
- Structure of curriculum content, learning areas and subjects
- Standards of resources
- Teaching methodology
- Assessing student teacher achievement

The D.TEd curriculum has been selected for the review because this is the most comprehensive teacher education course offered in an Education College. It is currently the longest programme offered to qualify a high school graduate to become a primary school teacher (PAT). The other courses currently offered in an Education College (the PPTT, correspondence course and DWT short courses) use the same textbooks issued for the D.TEd for the ‘training subjects’. As these shorter courses are only eligible for degree holders they do not cover academic subjects.

Table 4: Summary of the D.TEd

Name	Qualification status	Length	Mode of delivery	Prerequisite	Number of subjects
Diploma in Teacher Education (D.TEd)	Qualified to teach primary school and then middle school	2 years	College based	High school matriculation	Y1: 17 Y2: 18

In the absence of any clear curriculum documentation, the textbooks currently act as a proxy curriculum for teacher educators and therefore play a critical role in this review. This expanded role of the textbooks is neither typical nor best-practice, but in this instance they provide the content, breakdown of content and in some examples, an overview of objectives and assessment formats.

The scope of this component of the curriculum reform does not include training of Kindergarten teachers. The addition of an initial year of Kindergarten has been recently introduced to expand the education system to the international standard of K-12 (Kindergarten to Grade 12). The curriculum design and training of Kindergarten teachers is already underway and is not part of this particular review.

¹⁸ The first of the eight components of a curriculum framework - ‘Introduction- the Current Context’ has been covered in the Overview of Myanmar’s Education System and therefore is not repeated in this section.

The scope of this review also does not include in-service training. Going forward in-service training will be critical to up-grading existing teachers' skills, ensuring teachers remain up-to-date, and ensuring teachers can respond effectively to changing demands.

3.1. Educational policy statements

As it stands, there is no teacher policy. A teacher policy is a foundational document providing direction on how to attract, develop and retain quality teachers. The current lack of a teacher policy in Myanmar compromises the long-term impact of reform efforts and needs to be a prioritised.

Although there is no teacher policy, there are several directives that can be used as policy guidelines and there is the recent National Education Law 2014 (Amended 2015).

Policy directives:

- The **30-Year Long-Term Education Development Plan** (2001-2031) which aims to 'uplift' national education through a series of reform programmes includes up-grading the teaching-learning processes and the teacher education system;
- The **Framework for Economic and Social Reforms** (FESR) (2012-15) which sets out the government's priority policies includes upgrading teacher training and addressing teacher remuneration¹⁹;
- The **National League for Democracy's 2015 Election Manifesto** confirms the new government's intention to continue focusing on teacher education to ensure a good education system.²⁰

These are useful to reference but are not comprehensive enough to form the basis of a teacher education policy to direct national objectives.

Legislation:

The **National Education Law** (NEL) is the overarching legislation informing the delivery of education across the country. The NEL was enacted in September 2014 and amended in 2015. Education reform and subsequent amendments to this law have been made priority by the National League for Democracy (NLD).

It is important to note that Myanmar is under-going a political transition to a working democracy. This in itself provides a clear guiding objective as improving the education system is a vital component in empowering Myanmar's people with the ability and interest to make informed decisions. However, this transitional period will likely involve a period of flux and reorganisation, and the potential impacts of this fluidity at both policy and implementation level should be recognised. Having clear structures in place, such as a teacher policy and curriculum framework are critical.

3.2. Statement of overarching learning objectives and outcomes

As yet, there are no overarching learning objectives and outcomes specifically for teacher education. There are however a number of relevant sources that need to be considered. Learning objectives and outcomes are necessary to provide direction and purpose for both student teachers and teacher educators.

¹⁹ Myanmar, 'Framework for Economic and Social Reforms (draft): Policy priorities for 2012-15 towards the long-term goals of the National Comprehensive Development Plan', 22 November 2012.

²⁰ National League for Democracy, 2015 Election Manifesto Section 4. (At the time of writing the NLD had only recently been elected to government)

3.2.1. Objectives for the Education Colleges

There are six prescribed objectives for an Education College. Taken collectively they provide a clear image of a well-rounded teacher able to teach effectively, act as a role model within the community and contribute to the broader education system. The repeated use of the phrase ‘train and produce’ emphasises the importance of developing the competencies of being an effective teacher, not just the knowledge of what an effective teacher is. The list of objectives was clearly displayed on the walls in each of the ECs visited during the site visits.

The objectives prescribed for the Education Colleges are²¹:

1. To train and produce full-fledged teachers to carry out their duties and responsibilities in the construction of the new Education system, whom the parents of their pupils and the working people in their community can look up to trust and respect;
2. To train and produce teachers who can behave and conduct themselves well to become good teachers in conformity with the Myanmar way of life;
3. To train and produce competent teachers who are well versed in the subjects they are to teach;
4. To train and produce teachers who possess adequate knowledge of educational principles and teaching techniques which will enable them not only to teach effectively but also to promote wholesome relationship between the pupils and their homes, their schools and community;
5. To train and produce teachers who can assume leadership possessing a thorough knowledge and understanding of the principles of all round harmonious development of human personality in education; and,
6. To train teachers to encourage in research work that would contribute to widen the horizon of the knowledge of teachers to improve their intellectual and professional levels.

These objectives are issued by DTET and are only for the ECs. Currently there are no common standards or objectives between the UoEs and ECs. As noted previously, these two types of institutions are currently under different Ministry of Education departments (DHE and DTET). Having a set of common standards will be important to ensure and assure quality of training across the different institutions. This is critical for both quality and learning outcomes and to improve the perceived status of teachers in primary and middle school. Common standards will help ensure a unified workforce of teachers, with the same quality of instruction in schools across the country.

3.2.2. National Curriculum Framework for Basic Education

In May 2015, a series of curriculum frameworks were approved for the four levels of basic education (pre-primary, primary, middle and high school).²² This provides an important foundational document outlining the expected learning objectives and outcomes for Basic Education. For each level, the frameworks describe the aims, curriculum structure, the inclusion of a local curricula, the age-appropriate teaching and learning approaches, and the relevant types of assessment (see Annex 2).

The frameworks detail 13 Basic Education Guiding Principles. These emphasise the importance of the holistic development of a child and the importance of moral education and life-long learning:

²¹ The list of six objectives are issued by Department for Teacher Education and Training (DTET) [N.B. These were originally drafted and distributed to the ECs before the April 2015 restructure and therefore on the wall displays are referenced to the former department responsible for Teacher Education, the Department for Education Planning and Training (DEPT)]

²² The curriculum frameworks were approved in 2015: Myanmar National Curriculum Framework (5th Version)

1. All-round, balanced development;
2. Good citizenship;
3. 21st century skills;
4. Notion of completion in itself; (reference to completing school)
5. Preparation for higher learning;
6. Preparation for one's life in Myanmar society and modern economy;
7. Balance in academic literacy;
8. Appreciation of all cultures, customs and traditions;
9. Medium of instruction;
10. Languages of national groups;
11. Service to family, school, community and society;
12. Peaceful coexistence and living in harmony;
13. Promoting equality

The curriculum framework for teacher education needs to align directly to the BECF and should reflect the same expectations, subject areas and methodologies.

3.2.3. Teacher Competencies Standards Framework (TCSF)²³

The Teacher Competency Standards Framework sets out the agreed knowledge, skills and values needed for a teacher to be an effective practitioner.

The TCSF is currently being developed through a series of consultative workshops facilitated by UNESCO. The proposed draft comprises four domains:

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

Once established, the TCSF will form the basis for all teacher education across the different institutions, qualifications and stages (both pre-service and in-service). The framework should be used as the basis of the curriculum framework as it provides a clear description of the learning outcomes of a teacher-training course. It should be used to inform the design of the content structure, the methodologies and most importantly how the student teachers are assessed.

3.2.4. Regulatory body

As seen, there are already strong component parts to developing the learning objectives and outcomes needed to direct the curriculum framework. However, there is currently no designated regulatory body to provide the overarching coordination or assurance. A regulatory body would assume the task of defining and assuring learning objectives.

During a two-day consultation workshop (February 2016) the current lack of a regulatory body was discussed amongst the Curriculum Core Team, the national advisers and the consultancy team conducting this research. The group explored comparative examples of regulatory bodies in other countries including example of regulatory bodies independent of their respective Ministries of Education. The overall conclusion of the discussion was that, although a new concept in Myanmar, a

²³ The Myanmar Teacher Competency Standards Framework 2016 (draft) [this document is currently in draft with the next round of consultations scheduled for July 2016.

regulatory body should be introduced to as a means to improving teacher quality and through that learning outcomes.

3.3. Structure of the teacher education system

The structure of the D.TEd course is centrally prescribed and seemingly consistently implemented. This was evident in the similarities observed during the EC site visits. Every EC follows the same schedule as term dates are issued centrally by DTET. The academic year for the D.TEd starts in December and is divided into two semesters. Each semester is approximately 80 days long with 30.75 teaching hours per week. The directives come from the Ministry of Education; the key responsibility for teacher education falling to the Department of Teacher Education and Training (DTET). It is the Board of Studies at Yangon University of Education who design, and review the EC curriculum; EC Principals as well as university academics sit on this board. In Myanmar, there are currently no private teacher education institutes.

The D.TEd is a two-year diploma course. This is currently the longest teacher education course available for qualifying as a primary school teacher. The entry requirement is a high school certificate; there is no minimum matriculation score. The first year prepares student teachers to teach in primary school and the second year prepares them for middle school. Two years of training falls below the international benchmark, which is a four-year teacher-training programme. It is deemed too short a period of time to fit in both primary and middle school teacher training. It also means new teachers are often only 18 years old when they qualify as high school currently finishes at age 16).²⁴ The young age of the student teachers was clearly evident in the site visits to ECs.

As yet, there is no degree option for primary school teachers. If a prospect teacher matriculates with a high score, they can enrol in the B.Ed. in a UoE and become a high school teacher; if they just score a pass, they can enrol in the D.TEd and become a primary school teacher. The other teacher education options such as the PPTT, correspondence course and daily wage teachers (DWT) require a prior degree.

For a primary school teacher (Primary Assistant Teacher, PAT) to be promoted to a middle school teacher (Junior Assistant Teacher, JAT) they need to complete a further degree-level course. This does not need to be a B.Ed. but can be in any subject. The majority of teachers seemingly complete a degree-level correspondence course post their diploma through the University of Distance Education (UDE). The top twelve to fifteen percent of D.TEd students are invited to 'upgrade' and join Year 3 of the B.Ed.²⁵ This latter programme is called the 'bridge programme' and depending on demand, each year invites 500 of the highest scoring diploma students to continue studying education to degree level; these students then qualify to teach in high school.

There are two significant consequences to not having a primary or middle school degree-level course.

The first consequence is that primary school teachers are perceived as lower-rate teachers because of the lower standard of academic knowledge being taught. This perception was perpetuated by the promotional system, which follows the education level as a promotional 'ladder' with high school teachers being the most qualified and well paid. The consequence of this 'ladder system' means that primary schools do not retain experienced teachers as once they have gained experience in the

²⁴ Under the proposed reforms to the basic education curriculum, matriculation age will be higher as the reforms include a two additional years - kindergarten (age 5) and a Grade 12 (until age 18).

²⁵ Development of a Teacher Education Strategy Framework Linked to Pre- and In-Service Training in Myanmar – for the CESR Myanmar, December 2012, 12.

classroom, they are promoted to middle school.²⁶ Compromising teaching quality in the early years of development can incrementally affect later learning outcomes.²⁷ The importance of establishing a firm foundation for early years and primary students cannot be over-emphasised. The development of effective practice at these age groups is particularly demanding and can take several years to perfect. It is important that teachers with the talent and aptitude for these age groups are given the opportunity to develop their skills beyond their initial teacher training inputs.

The second consequence of structuring the system this way means all primary school teachers need further study to secure their promotion:

- To prepare the student teachers to transition into year 3 of the B.Ed. (bridge programme) or of another degree-level programme, all student teachers are taught to degree-level standard in the academic subjects. The current D.TEd includes 7.5 hours a week of learning advanced level 'academic subjects'. These academic lessons are aimed to prepare students for degree-level standards; it is not directly related to developing classroom-ready teachers. It is seemingly an unrealistic expectation that adds to overcrowding the current curriculum and compromising the ability to train student teachers effectively.
- Those student teachers who graduate with a D.TEd, need two years of teaching experience as a PAT and a degree to be promoted to middle school. Most study part time via the University of Distance Education (UDE). The distance however is problematic for science subjects as these include requisite practical work. Many teachers who cannot travel to attend these sessions have to opt for Arts subjects even if they trained in Science during their diploma. This means not only do they have to start from the beginning of the course but also results in a shortage of science teachers in middle school.

Introducing a degree for primary and middle school teachers will address these issues.

The final comment to make on the structure of the teacher education system is that there is currently no formal link between pre-service and in-service training. The in-service training provided to teachers is ad hoc. In-service training is not within the scope of this review but the two stages of teaching training need to be interlinked. The teacher competency standards once finalised will provide a good framework to support teachers' on-going professional development.

3.4. Structure of curriculum content, learning areas and subjects

The structure and content of the curriculum itself is also centrally prescribed. The Board of Studies at Yangon University of Education designs the curriculum content, and the textbooks are then published by DTET. There is a list of the curriculum subjects but no actual curriculum document.

The D.TEd curriculum is divided into four subject areas. The first three are delivered in the ECs; the fourth is delivered through school placements (referred to as bloc teaching). In Year 1, the student teachers are taught 17 subjects; in Year 2 this increases to 18 as *Teaching of Social Sciences* is split into the *Teaching of History* and the *Teaching of Geography and Life Skills*. There is not yet a documented description of each subject area or a rationale for how it contributes to achieving the learning objectives.

²⁶ The MoE announced in a government convened seminar on Teacher Education in August 2016 that they will revise the promotion system

²⁷ Education for All Monitoring Report and UNESCO Institute for Statistics (2013). Addressing the Crisis in Early Grade Teaching. Policy Paper 07, UNESCO, Paris

Table 5: Summary of the four subject areas currently delivered in the D.TEd

Subject area	Description	Subjects
Training subjects: (7/8 subjects) 15.75 hrs. per week	Methodology (methods of presenting instructional material) and pedagogy (practice of how best to teach by understanding how children learn) through relevant subject matter content	1. Educational Theory 2. Educational Psychology 3. Myanmar Language Teaching 4. English Language Teaching 5. Teaching of Mathematics 6. Teaching of Science <i>Year 1</i> 7. Teaching of Social Study (History, Geography, Life-Skills) <i>Year 2</i> 8. Teaching of History 9. Teaching of Geography and Life-Skills
Academic subjects: (3+2 subjects) <ul style="list-style-type: none"> • Top 3 are compulsory • Choice of 2 subjects from the sciences or social studies 7.5 hrs. a week	Knowledge and understanding of academic subjects. There is no methodology given for these subjects.	1. Myanmar 2. English 3. Maths 4. Chemistry (science) 5. Physics (science) 6. Biology (science) 7. History (social studies) 8. Geography and Life Skills (social studies) 9. Economics
Co-Curriculum Subjects: (5 subjects) 7.5 hrs. a week	Knowledge and understanding of non-academic subjects. There is no methodology given for these subjects.	1. Agriculture 2. Music and Dancing 3. Fine arts 4. Industrial Arts/Domestic Science 5. Physical Education
Teaching Practicum: (referred to as 'Bloc teaching') 45 days	School based teaching practice.	

One of the most common concerns raised in previous reviews of the EC curriculum is that it is overcrowded. There are too many subjects and too little time. Each term there are approximately 80 days; 20 of these are allocated to exams and tutorial testing which leaves 60 days for lectures. This is not seen as sufficient to cover the expected content. Student teachers only have 15 minutes of teaching practice every two weeks and a five-minute period for reflection in-between lectures.

Specialist pathway options

The current D.TEd curriculum does not include options to specialise. All student teachers trained through the D.TEd are trained to teach both primary and middle school age children (Grade 1 to 9 covering ages 5 to 14)²⁸. There are no electives to study an individual subject or specialist areas such as special needs or language teaching. However, all student teachers choose between studying either a science or social studies combination as their academic subjects (in addition to the compulsory subjects of Maths, Myanmar and English). The streaming selection for this is based on matriculation scores.

In other countries, specialist pathways are often included within a curriculum to allow teachers to become experts in their fields and builds on specific interests. This is particularly relevant for middle school teachers who are expected to be subject specific teachers. In the current B.Ed. for example,

²⁸ The B.Ed. delivered in the UoEs qualifies teachers to teach high school.

there are options to specialise. The B.Ed. curriculum structure is based on having a core curriculum plus a series of electives.

One consideration in offering specialist pathways is the logistics of teacher deployment. When teachers become specialists, deployment is made more complicated as there is a need to balance supply and demand for specialisations in all school locations.

Academic subjects

Each student teacher has to study five ‘academic subjects’ (see Table 5). This accounts for 7.5 hours of training periods per week (24.5%). During the review it became apparent that the inclusion of ‘academic subjects’ in the curriculum is not to prepare student teachers to teach but to prepare them for further degree-level study:

- The academic subjects are unusually advanced for a teacher education course; in most of the D.TEd academic subjects the content is Grade 11 or degree-level standard. In other countries teacher education courses aim to train new teachers to be competent in a ‘level’ higher than they will teach e.g. a primary school teacher would be competent in middle school content. An example of the high D.TEd standard is the ‘order one differential equations’ in the Second Year Maths textbook. This is a subject usually not taught until degree level. The exception to the advanced level of academic subjects is English language, which is regarded as a competency and is therefore focused on mastering proficiency not content.
- The subject of Economics is included as part of the current curriculum. This however is not part of either the primary nor middle school curriculum and therefore is not directly relevant for preparing student teachers to be classroom ready.

When asked the reason for including content and standards beyond what is needed in the classroom, the participants in the focus group discussions (EC principals, heads of departments and teacher educators) explained about the importance of preparing all students for either the bridge programme or further learning in order to get a degree. They recognised that although primary school teachers need a good understanding of the subject they do not need degree-level understanding across five different subjects. During the discussions they realised the implication this expectation has on over-burdening the curriculum. The high level of academic achievement is not reflected in the list of the six EC objectives (see Section 3.2.1).

There are also components of the Basic Education curriculum that are not yet reflected in the D.TEd curriculum. As per the 2015 Basic Education curriculum framework, ‘local curriculum’ is a new subject that has been introduced. There will be five periods for local curriculum in primary and four periods in middle school. The purpose of the local curriculum is to provide a relevant, localised approach to teaching ICT, language and culture, co-curriculum subjects and life skills. The Basic Education curriculum is under-going a parallel reform and therefore will be changing over the next couple of years. It is critical that the EC curriculum is kept up-dated and is able to respond in a timely way in order to reflect the changes needed. This was also noted for the co-curriculum subjects (see section below).

Training subjects

The training subjects look at both how and what to teach in the classroom. This reflects international best practice in integrating theory and practice.²⁹ The training subjects account for over half (51%) of the teaching hours (15.75 hours per week out of 30.75). Year 1 includes seven subjects focused on

²⁹ 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

training how to teach primary school age children and Year 2 includes eight subjects training teachers to teach middle school age children. The subjects include two theory-based subjects, Education Theory and Education Psychology and then either five or six (depending on Y1 or Y2) subjects on how to teach a specific subject matter. For example, one lesson observed was a Grade 7 Geography lesson where the student teachers were learning about the Earth's rotation through learning about relevant teaching methods for 12 year olds. This is an effective approach in producing classroom-ready teachers as by integrating theory and practice they learn to translate content into an appropriate format to aid pupils' learning. The learning principle behind the current training subjects is a strong element of the current curriculum structure that should be maintained.

During the consultations and textbook review however, it became apparent that this integration of theory and practice was not as strong in the actual learning of Education Theory and Education Psychology. The textbooks for these subjects are text-heavy and do not include opportunities to apply the theoretical foundations directly to practice teaching. The student teachers are taught how to distinguish between the seven different types of intelligence for example, but not how to use this knowledge to help children with different intelligences in their classrooms.

Co-curriculum subjects

The co-curriculum subjects account for the same amount of teaching hours as the academic subjects (7.5 hrs. a week- 24.5%). These lessons are delivered early morning and then at the end of the teaching day. There are five compulsory subjects with domestic and industrial science split according to gender. The two issues that were raised during the consultations were:

- 1) The current co-curriculum subjects do not align with the current Basic Education Curriculum framework. The only overlap is Physical Education.
- 2) The co-curriculum subjects do not need the amount of time currently allocated. This was a frequent topic of discussion when speaking to EC staff.

Teaching practicum / bloc training

The fourth subject area in the curriculum is the teaching practicum, which is referred to as 'bloc teaching'. The intention is that each year, student teachers are able to put theory into practice by spending 45 days experiencing what it is like to teach in a classroom. Bloc teaching is essential for new teachers to develop their own teaching practices and competences.

The perception gained from the consultations however is that although 45 days is a sufficient length of time, the time is not being optimised because of the complexities in managing and monitoring the individual placements.

The school placements are organised by the ECs' Heads of Administration or Heads of Training in collaboration with the township education officers (TEOs). The TEOs however report to the Department of Basic Education (DBE), a different ministry department from the Education Colleges (who report to DTET). This means that coordinating and then monitoring of placements falls to two different departments. This divide may also account for the apparent lack of direct relationships between the ECs and local Basic Education schools outside of the bloc teaching.

The placements are designed so each student teacher is supervised and mentored by the class teacher and monitored and assessed by the head teacher and the TEO or Assistant TEO (ATEO). One of the issues identified is that none of these supporting roles has sufficient time or training to do so effectively. According to anecdotal evidence, the class teacher is often either unaware or unwilling to share teaching duties and there are reports that student teachers are not getting adequate time in

the classrooms and spend more time supporting school admin than practicing teaching skills. The TEOs are given a standardised checklist to rate the student teachers' performance but receive minimal guidance or training on how to use it or give feedback.

The teacher educators (TEs) themselves would be the ideal candidates to monitor and support their students but this is seemingly unfeasible due to time and cost constraints. According to the EC staff, while one batch of students is away on bloc training placements, the TEs are teaching another cohort of student teachers. When the TEs were asked whether or not they would like to be able to monitor the bloc teaching, they all agreed it would be useful, but listed the scheduling and travel expenses as the constraints. In Hpa-an EC, despite receiving no funding, in 2014 - 2015, the TEs took the initiative to monitor the placements themselves. They confirmed how beneficial this was to the teaching-learning process and in identifying issues that they could then address in later trainings. A further comment made by the TEs was the need to better prepare the students pre-placements and requested more time to help them with lesson planning and opportunities to practice teaching to their peers (micro-teaching or peer-demonstrations). It is not clear how much time is officially allocated to preparation but in Yankin EC, prior to the bloc teaching, two days were dedicated to giving the student teachers time to practice; because of the large class sizes (50+), this was little more than 15 minutes each.

Assessment of the placements is through the TEOs' checklist and the student teachers' post-practicum report based on daily journals. At the end of a placement, the TEs receive both the checklists and reports but it is not clear how these are used to provide constructive feedback. The student teachers receive a 'score' rather than formative observations about their pedagogical practices or behaviour. The bloc-teaching component does not receive equal weighting in the student teacher end-assessment.

Two further issues raised during the review were:

1. Although most student teachers are placed in schools in or near their hometowns or villages so they can live at home, the cost to the Ministry remains high. Each student teacher (approximately 10,000 each year) receives travel expenses to return home and a subsidy of 1100 kyat per day.
2. The scheduling of the bloc training for Year 1 student teachers coincides with the exam period. This means regular lessons are not being carried out and student teachers are therefore not able to practice teaching.

Inadequate teaching practice impacts the level of teacher readiness. Teaching in a classroom is dynamic and challenging, and student teachers need to practice to develop their approach in how to respond effectively to meet the needs of their learners. Myanmar is also a diverse country and although much of the education system is centrally prescribed, each classroom will vary; multi-grade classrooms, multi-lingual, range of class sizes from 5 to +50 etc. The more exposure student teachers get to teaching pupils and practicing their skills, the more confident they will be and able to respond to different situations.

To support this section on the review of the structure of the curriculum content, learning areas and subjects a summary analysis matrix is provided in Annex 3. For each subject, this matrix outlines the teaching hours per day, language of textbook, language of examination and assessment.

3.5. Standards of resources

This component of a curriculum framework describes the standards for all resources in the Education Colleges including teacher educators, classrooms, practice schools and materials. Currently these are not documented per se but the following section maps out what exists to inform the future frameworks.

Teacher Educators

Each EC has approximately 65 teacher educators (TEs). The TEs are managed by the Principal, who is supported by the Vice Principal and three Heads of the Departments (Head of Academic, Head of Training and Head of Administration).

- The pre-requisites for TEs differ under the different departments:
 - Those working as academic TEs are referred to as lecturers. Lecturers have to have a degree in the specific subject they teach but require no prior training or teaching experience. A high percentage of lecturers hold a Master's degree.
 - Those working as training TEs are referred to as tutors. Tutors need a B.Ed. and a minimum of five years' experience in teaching. Due to the current system where only high school teachers qualify at degree level, assistant lecturers often have no experience in teaching middle and high school. Although training subjects constitute almost double the amount of instructional time, the number of assistant lectures and tutors is about equal.

There is not yet a systematic pre-service course to prepare TEs for teaching student teachers (adult learners). There is also minimal systematic professional development for the TEs but in the last two years the British Council and VSO (Volunteer Services Overseas) has delivered a DFID funded project, called EfECT (English for Education College Teachers). To date this project has delivered a year of English language training and a year of English and teaching methodology.³⁰

Each TE specialises in a subject (whether in the Academic, Training or Co-curricular department). This is a good approach to developing and sharing expertise. However, during the site visits, it seems that substituting for absent teachers and having to teach other subjects is a common practice.

From the discussions with EC staff during site visits, there is seemingly minimal interaction between the different departments. This again highlights the alternative agenda of the academic subjects. Other than a monthly meeting, the only inter-departmental event discussed was the concept of a board of studies. This was raised during a later site visit to Thingangyun EC. The Thingangyun EC staff described how once a semester all TEs worked together to collectively prepare a lesson plan and then observe one of the TEs in delivering it.

The TEs do not have clear job descriptions. In addition to their teaching responsibilities, there seems to be an undefined list of extra chores. According to the needs assessment analysis carried out for the capacity planning component of this consultancy, this includes both internal EC tasks such as domestic chores in the student hostels and guard duty as well as duties outside of the EC such as attendance at district and state/region level meetings and religious ceremonies.³¹

³⁰ <http://www.britishcouncil.org.mm/programmes/education/english-education-college-trainers-efect>

³¹ UNESCO (2016), *Summary of Needs Assessment, Strengthening Pre-service Teacher Education in Myanmar (STEM) Project*, UNESCO, Myanmar p.12

Classrooms

The ECs visited had good-sized classrooms, but the condition of these was variable with many of the EC buildings in need of maintenance. The main observation from the site visits was the number of students per class. The average class-size observed was 1:50 with many students sharing bench seats or multiple students sharing a single desk.

Practice schools

Each EC has an associated ‘practice school’ in the locality (most often on the same premises). Unlike most government schools, the ‘practice schools’ are under the jurisdiction of DTET and not DBE. The schools exist to provide ‘real classroom’ opportunities for the student teachers to practice. As mentioned previously, research has shown that the more frequently student teachers are introduced to real-life classroom experience, the better prepared they will be to be competent full-time teachers. However, as confirmed during the site-visits the practice schools are under-utilised, and are seen as atypical to the average government school in that they are well resourced and have low pupil teacher ratios.³² While pupils from the practice schools occasionally attend demonstration lessons at the ECs, only one EC (Hlegu) is known to regularly send student teachers into the practice schools to deliver lessons. The main constraint in using the practice schools is the large number of students per course (on average 450).³³ It is hard to effectively provide practice opportunities to this number without compromising the learning environment for the pupils enrolled.

Materials

The only instructional materials in the D.TEd are the student teacher textbooks; there are no teacher educator guides or supplementary teaching resources. The textbooks are used as more than just a functional learning reference and in the absence of a documented curriculum provide the teaching structure and syllabus. The content for first and second semester consists of the first and second half of the textbook accordingly. The TEs plan out the content of each lesson by dividing the number of textbook units or chapters by the number of lessons per semester.

As the TEs have no specific guides or resources, they have to use the textbooks designed from a student perspective. These are narrative based and do not include guidance on instructional teaching methods.

The current D.TEd textbooks date back to 1998. Over the last 17 years there have been a series of subject specific textbook reviews and updates. Twenty-two of the 61 textbooks were reviewed in 2007; five in 2010. The remainder have not been reviewed since 1998. The need to update the textbooks was one of the main points raised during the consultations. A few clear examples to illustrate this include:

- The data tables in the Economic textbook dating back to 1996/7, the year before the textbooks were first published
- The ICT textbook describing software packages which are now ten years old (the ICT textbook was produced in 2005).

Three of the four subject areas have textbooks: academic, training and co-curricular. There is no instructional material for the bloc teaching. In general, the textbooks provide comprehensive content on each subject; on average each subject covers ten different topics a year. The textbooks vary in the scope of content provided. This is clearly seen across the different subject areas:

³² This was also documented in Hardman, F. et al. (2013) *Development of a Teacher Education Strategy Framework Linked to Pre and In-Service Teacher Training in Myanmar*, UNICEF Myanmar.

³³ EC D.TEd student teacher data as of August 2015 (Source: DTET)

Academic subject textbooks

The academic textbooks provide predominantly narrative text; some include summative questioning at the end of a unit or chapter. They are text dense with minimal illustrations or tables. The intended academic level is high and as a result textbooks are focused on condensed knowledge transmission with little time given to knowledge application. In the social science textbooks there are no interactive learning activities. The science textbooks (chemistry, physics and biology) do however have an additional book of activities.³⁴ These each contain detailed instructions for specific activities and in most cases include a series of questions to answer post-activity. They are well structured but reveal how few activity-based lessons are delivered each year (average of seven per subject). The science textbooks are some of the thickest, indicative of the amount of content the teachers are expected to learn; the actual content, especially in Year 1, emphasises concepts rather than application of concepts with the focus being on learning definitions of key terms. Expectations to align with degree-level academics means that textbooks are not appropriately pitched to the student teachers' level but instead assume a higher expectation of ability.

All the academic textbooks are written in English. The TEs interviewed felt that for maths and science this is not a problem as English is the medium of instruction for these subjects in high school and therefore the student teachers have prior exposure to the vocabulary. It was, however, seen as a problem for social studies, which is taught in Myanmar in high school. The teacher educators are concerned that the language barrier compromises their teaching, as lesson time is taken up with having to translate rather than teach content.

Training subject textbooks

The training subject textbooks provide a more balanced approach to content and methodology. All the training subject textbooks provide some sort of learning objectives and in most cases include chapter-end assignments. The objectives are listed either at the beginning of the textbook and relate to the whole year or are broken down to semester-level or module-level objectives.

The following is an example of a learning objective taken from the First Year Science textbook. In this example, the textbook lists the general and the specific learning objectives for each of the seven modules but as seen both are relatively brief descriptions.

General objectives:

- To understand the definition and importance of Basic science

Specific objectives:

- To be able to describe the definition of Basic Science
- To be able to explain the importance of Basic Science

The assignments included in the textbooks focus on preparing student teachers for the classroom. For example, an assignment question asks: 'explain systematically how to train pupils to take an interest...' or 'explain how you will train the pupils to achieve...'

The English language textbook has the strongest pedagogical structure and outlines the teaching inputs, the practice task and how to structure feedback on the task. It includes tables outlining the teacher activity alongside the learner activity. The format is good but on analysing the content, the pedagogy being taught is still passive learning with the learner activity often cited as a simple 'Repeat after teacher' or just 'Yes to teacher'.

³⁴ Practical Chemistry, Practical Physics and Physics Practical Instructions, Experimental Biology, Practical Geography

Co-curriculum textbooks

There is a textbook for each of the co-curriculum subjects. They are split across the Year 1 and Year 2 to reflect the different age groups. These textbooks include objectives and in the case of Music and Dance the textbook includes a breakdown of objectives for each grade in school.

Language policy

The decision about the language of the various textbooks is part of a broader policy level decision about medium of instruction in Myanmar's schools. The curriculum framework needs to reflect what will be relevant for teachers in the classroom and what will ensure the best learning outcomes.

The National Education Law 2014 implies potential for changing the language if deemed necessary to promote better learning outcomes³⁵:

- Teaching shall be conducted either in Myanmar or English or both.
- Languages of the indigenous people shall be used in conjunction with Myanmar as a medium of teaching as required at the basic education level

The ratio of textbooks to student teachers was not noted as a problem with most students having their own copies. The two areas in need of improvement however are:

- Actual print quality is poor and often the illustrations and photographs are hard to see. The history textbooks provide clear examples of almost unidentifiable photographs.
- The number of inconsistencies and errors, for example:
 - There is no consistency in terminology between the textbooks, which could lead to confusion. For example, some textbooks are divided into chapters and others into units; some refer to objectives whereas others refer to aims.
 - The textbooks printed in English language have spelling mistakes (e.g. 'envolutionary', 'statementsw') and are grammatically poor. There are mistakes in the actual layout. For example, the front cover of the history textbooks has been mixed up, for what appears to be Year 1 is actually for Year 2 and vice versa. In the economics textbook, the page numbers listed in the Contents (called Organisation) do not align to actual page numbers.

In addition to using the Ministry issued textbooks the TEs also made reference to supplementary information in the EC libraries. The libraries seen during the site visits had a large number of books, but it was not clear how up-to-date or relevant these books are. TEs spoke about the need for more subject specific books such as dictionaries and reference books. Few of the TEs mentioned the Internet as a point of reference; accessing online resources does not appear to be a common channel for finding further information or teaching guidance. Although all TEs and student teachers seem to have smart phones and 3G access, there is not yet an evident role for mobile-learning or online research. In Dawei EC, there is an actual policy to confiscate student teachers' phones during the week (from Sunday night to Friday night). This policy is ignoring the potential of mobile devices as sources of information and self-directed learning opportunities.

The review process also raised concerns about access to resources and whether each EC has the equipment and materials to conduct activities and experiments. One teacher educator described that due to resource constraints, they often did not conduct the science experiments and just discussed

³⁵ NEL Ch. 7 (43)

the concepts. In one of the science lessons observed during the site visits, a TE was explaining the concept of a battery but, despite being easily available, had no actual battery to show or demonstrate with.

To support this section on the review of the standard of materials, a summary analysis matrix of the current textbooks is provided in Annex 4. For each subject, this matrix outlines date of review, learning objective and language of textbooks/chapters.

3.6. Training methodology

The training methodology section of the EC curriculum framework refers to the methodology used to train the student teachers. As the student teachers are being trained in how to teach in a basic education school classroom, this component needs to reflect the methodology expected in the basic education school classroom.

The current methodologies used by TEs vary. The predominant teaching style observed was lecture-based³⁶ although there was evidence of group and pair work and in some ECs some more interactive activities. It should be reiterated that the training subjects and the co-curriculum subjects use an effective methodology of combining relevant basic education curriculum content with appropriate teaching techniques. The fact that this is not the case in the academic subjects again reiterates the supplementary purpose of this subject area. In the training and co-curriculum lessons there is no split between what is being taught and how it is taught. The purpose of the lesson is to train student teachers how to plan and teach specific grade-level content. As described in the Education Theory and Education Psychology textbooks, teaching should align with children’s developmental stages and therefore teaching methodologies should be age-appropriate. This is addressed in the training and co-curriculum methodologies, but because of the way the D.TEd is structured with Year 1 focusing on primary level and Year 2 on middle school, newly qualified teachers entering primary schools will not have used or practiced the appropriate age-level methodology for over a year.

The overcrowded curriculum is seen as compromising the methodologies. There are too many subjects, too little time, and too high an expectation on knowledge acquisition. An overcrowded curriculum almost automatically results in teacher-centred as opposed to student-centred training because there is no time for participatory activities or open questioning and to get through the material in time, the teacher is limited to reading the textbooks. To ensure all the subjects fit into the timetable, each lesson (including practical science lessons and the co-curriculum subjects) are only 45 minutes long. Although examples of good training techniques were observed during the lesson observations, the predominant teaching style is still transmission based, involving lecturing and cued elicitation. The narrative-dense textbooks further promote this style of passive learning, again emphasising retention rather than application of knowledge.³⁷

The congested timetable also means there is minimal time for student teachers to reflect on their own individual teaching styles; as mentioned above they have only five minutes between classes. Self-reflection is an important aspect of a student teacher’s personal development to develop the necessary skills and competences that an effective teacher should have.

³⁶ “The model of teaching the students were being presented with was essentially transmission-based, stressing a hierarchical learning of knowledge and conventional teacher-fronted classroom organisation.” Hardman, F. et al. (2013). *Development of a Teacher Education Strategy Framework Linked to Pre and In-Service Teacher Training in Myanmar*, UNICEF Myanmar.p.16

³⁷ Atkins. S et al. *Assessment of Pedagogical Practice and Practical Teaching Experiences in Myanmar’s Education Colleges*, UNESCO, Myanmar.; Hardman, F. et al. (2013). *Development of a Teacher Education Strategy Framework Linked to Pre and In-Service Teacher Training in Myanmar*, UNICEF Myanmar.

In addition to limiting the time needed for using effective methodology, the overcrowded curriculum results in large class sizes, again to fit all classes into the timetable. The average class size observed was 50 students. Research shows that class-sizes of 30 plus can affect teaching quality because it is harder to give individual attention and sustain interactive, engaging activities.³⁸ The other obvious constraint is lack of space; some classes observed demonstrated use of group work teaching, but with no space to reconfigure desks the student teachers simply turned around to face the row behind. The problem of class-size is not restricted to education colleges and is also an issue in many of the government schools. This broader issue is beyond the scope of this review but is mentioned here to reflect on the contextual reality of what the teachers, especially those deployed to urban areas where the pupil to teacher ratio is generally higher, will have to face.

3.7. Assessing student teacher achievement

Assessment in the ECs includes tutorials, assignments, practical tasks and written examinations. Student teachers are assessed every semester with each semester accounting for 50% of the year-end score. Tutorials account for 10%; assignments and practical tasks account for 10%; and, the semester end written examination accounts for 30%. The semester end test is a National exam administered in each EC. After the period of bloc teaching, student teachers also receive a score based against the monitoring checklist but it is not clear how this is incorporated into the overall assessments.

Because of the lack of subject-specific learning objectives, it is hard for TEs to assess student teachers using formative techniques. When asked about what objectives the student teachers were assessed against, the general consensus was that the teacher educators created their own objectives based on the textbook content. The assessments therefore are often more focused on retention than application. This reflects the current basic education examination system where pupils are tested on their knowledge base and therefore is a continuation of what the student teachers are accustomed to from their own recent school experience. Introducing innovative assessment practices such as portfolio-work, where students can learn and reflect on good pedagogical practice, or formative assessments such as open questioning or observing classroom demonstrations, are not yet a common component of the assessment practices in the ECs.³⁹ Student teachers therefore are not being taught the importance of competency-based nor formative assessment:

- Competency based assessment is when a student teacher is tested on how they use their teaching knowledge to teach;
- Formative assessment is important for TEs to assess whether and what their student teachers have understood and to inform and adapt teaching practices, learning content and exercises accordingly.

Student teachers need the opportunity to develop good assessment practices through classroom observations, teaching practice and self-evaluation.

As mentioned, some of the textbooks provide summative assignments at the end of either a chapter or unit. However, there are some textbooks such as the academic history textbook that do not include any questions. The majority of questions, especially in the academic textbooks, require the student teacher to demonstrate or repeat knowledge. There are no examples of graded assessments where the questioning is structured to move from lower order to higher order thinking skills (critical thinking).

³⁸ John Hattie: <http://visible-learning.org/hattie-ranking-influences-effect-sizes-learning-achievement/>

³⁹ Development of a Teacher Education Strategy Framework Linked to Pre- and In-Service Training in Myanmar – for the CESR Myanmar, December 2012, 16-19.

The final diploma certificates for the D.TEd are issued by DTET. After completion of the two-year course, the student teachers are evaluated by the Education College Board, chaired by the Director General of DTET. The list of successful student teachers is then sent to the MoE for approval. Once approved DTET issues the teaching certificates and the teacher names are added to the list of teachers for deployment. From looking at the pass-rates, seemingly all those who complete the course stipulations automatically pass.

3.8. Summary of review findings

The table below outlines the most critical findings from the review. These will be directly addressed in the section on recommendations.

Educational Policy Statements

There is no teacher education policy in Myanmar to define specific goals and expectations of the teacher education system. The National Education Law (2014) is currently the main documented directive.

Statement of Broad Learning Objectives and Outcomes

There are currently no formalised statements of learning objectives but the Basic Education curriculum framework (2015) provides a temporary basis while the curriculum for Basic Education undergoes a reform and the MoE is currently drafting a teacher competency standard framework. There are also prescribed objectives for the ECs.

There is no designated regulatory body responsible for designing or assuring teacher-specific standards. This weakens accountability to meet prescribed standards.

Structure of the Teacher Education System

A two-year training course is too short a time period to adequately equip a high school graduates with the knowledge, skills and attitude needed in a classroom.

The lack of a degree-level qualification for primary and middle school creates a hierarchy within the different education levels, with high school teachers highly regarded and better paid. This 'ladder system' undermines teaching quality in primary school.

There are no linked continuing professional development opportunities.

Having one Ministry department responsible for Basic Education schools and another for teacher education creates an operational fissure that undermines opportunities for teachers to practice teaching.

Structure of curriculum content, learning areas and subjects

There are no options to specialise; this means teachers cannot develop expertise in a particular age-level, subject or niche.

The academic subjects are primarily to prepare student teachers for later degree-level study rather than for classroom. They expect an advanced level of comprehension beyond what is required for primary and middle school teachers.

Inadequate management and monitoring of the 'bloc teaching' (practicum) denies student teachers the opportunity to gain practical experience.

Standards of resources required for implementation

There is a missed opportunity in helping create ‘teacher readiness’ by under-utilising the EC’s practicing schools and making use of the local schools in the surrounding community.

The textbooks are used as more than just a functional learning reference, and in the absence of a documented curriculum provide the teaching structure.

Training methodology

There is a good level of integrating grade-specific content with age-appropriate methodology in the training and co-curricular subjects. This is not evident in the academic subjects.

The dominant teaching style is lecture-based which restricts learning to ‘knowledge transmission’

The methodology is compromised by the congested curriculum and overcrowded classrooms.

Assessing student teacher achievement

The knowledge transmission-based teaching approach results in a focus on assessing retention of knowledge, rather than its application.

4. INTERNATIONAL COMPARATIVE ANALYSIS

This section provides a comparative analysis of international best practice in teacher education. This will be used to inform the design of the curriculum frameworks. Teacher education varies from country to country and it is important to look at a range of regional and global approaches to effective teacher training and to learn from existing analysis on evident trends amongst the highest performing education systems.⁴⁰

The following excerpt from a comparative survey of teacher training provides a good introduction to the broad direction of teacher education reform internationally:

“There is a general perception that there is a marked change in the context of education in general and teacher education in particular. In a world that increasingly values specialization, teachers were found to be **lacking in expertise in their respective fields of specialization**. It is also recognized that there is a **shift in educational emphasis from what to learn to how to learn** brought about by an accelerating pace in the production of knowledge triggered by the intensifying and pervading scientific and technological revolution. But studies show that teachers **do not have the appropriate learning tools such as communication, problem solving, and thinking skills** to respond to such trends.

New imperatives are forcing teacher education institutions to re-visit and re-think their assumptions, theories, and practices about the kind of teachers that must be produced. The

⁴⁰ To look at existing analysis, a series of key documents are referred to. These include: McKinsey and Co. (2007), *How the world’s best performing school system come out on top*, Sutton Trust; Coe. R et al. (2014) *What makes great teaching?:* Westbrook, J. et al., (2013). *Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries*, Education Rigorous Literature Review; UNESCO (2015). *Teacher Policy Development Guide*; World Bank (2012). *What matters most in teacher policies (SABER)*; various OECD reports. The reference to high performing education systems is based on those that score highly in OECD’s PISA rankings: <https://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>

current curriculum is deemed insufficient to address these concerns. Issues such as the growing gap between **theory and practice**, failure to make teachers **reflective practitioners**, overlapping of courses, and the need for teachers to be **independent and scientific thinkers and research driven** in their instruction are among the push factors that make revision of the current teacher education curriculum an urgent undertaking⁴¹.

The following comparative analysis again uses the core component parts of a curriculum framework as its structure. For this section though the different parts are grouped together into three areas, which is thought to be more effective for analysis discussion:

1. Education Policy, Learning Objectives and the Teacher Education System
2. Curriculum Structure
3. Resources, Methodology and Assessment

4.1. Education Policy, Learning Objectives and the Teacher Education System

Currently, Myanmar has certain national education policy directives and a draft version of a teacher competency standards framework, but as yet no teacher policy, nor a teacher regulatory body or teacher council to define and set these.

A teacher regulatory body/council provides national-level direction on the rationale behind what should be covered in a curriculum in line with national priorities, expected learning outcomes and the minimum competences and standards of teacher educators. All of these are normally included in a curriculum framework. A regulatory body often provides the link between the expectations of what is being taught in schools (the basic education curriculum) and how teachers are being trained to deliver this. They have the authority to regulate who and how teachers qualify. In some countries they are part of the respective Ministry of Education and in others are an independent entity.

The following provides a range of examples to learn from how different countries effectively manage national level teacher education policy and regulate and assure quality.

The General Teaching Council for **Scotland, UK** (GTCS) was one of the first teaching councils ever established when it was set up in 1965. As of 2012, legislation passed by the Scottish Parliament made it the world's first independent, self-regulating body for teaching.⁴² 19 of the 37 members elected are teachers. The GTCS is responsible for upholding the quality of both pre-service and in-service training. On behalf of the Scottish Government, the GTCS develops the Guidelines for Initial Teacher Education Courses and defines and monitors teacher professional standards. The GTCS is specific to Scotland but **England, UK** has a similar body, which was recently re-structured and re-named the National College for Teaching and Leadership.⁴³

Unlike the GTCS, the Teachers' Commission of **Thailand** (TCT) is part of the Ministry of Education. It is responsible for setting professional standards, overseeing maintenance of professional standards and

⁴¹ Felice, Y.I. *A Comparative Survey of Teacher Training in Selected ASEAN States: Implications to Human Rights Education* Philippine Normal University <http://www.hrusa.org/workshops/HREWorkshops/usa/AseanReport.htm>

⁴² GTCS is governed by a Council made up of 19 elected teachers, 11 nominees from stakeholder groups and seven appointed lay members. Council members serve for four years and election/reappointment processes take place every two years when half of the members step down. The Council sets GTCS policy. It is funded by annual registration fees paid by teachers, lecturers and other education professionals.

⁴³ <https://www.gov.uk/government/organisations/national-college-for-teaching-and-leadership>

ethics and the issuing and withdrawal of licenses. As per the Teachers and Educational Personnel Council Act, all professional educators must have a licence to practice.⁴⁴

In the **Philippines**, part of the Basic Education School Reform Agenda BESRA included the set-up of the National Competency-Based Teaching Standard (NCBTS). This institutionalised a competency-based framework for teacher training, and a performance assessment process for hiring and promotion.⁴⁵

Australia is currently investigating the option of nationwide regulations to improve and assure quality in pre-service training. All training providers would need to gain accreditation to operate by providing evidence that graduate teachers are meeting the graduate level of the Professional Standards.

In 2005, **Indonesia** passed The Teacher and Lecturer Law No. 14/2005. This piece of education legislation mandated that by 2015, all three million elementary and high school teachers in Indonesia had to be certified. Much of the Law looks at in-service training to upgrade the existing unqualified teachers but interestingly the Law mandates four broad teacher competencies: academic, personality, pedagogic and emotional aspects. The latter three looking more at teacher behaviour and approach. There is a National Standards Board (BSNP) responsible for developing teacher standards and a National Accreditation Agency (BAN-PT) to ensure that training institutions are using these standards in revising existing courses and developing new teaching training courses.

One of the clear roles of a regulatory body or teacher council, made apparent in these examples is defining and assuring teaching standards. OECD (Organisation for Economic Cooperation and Development) research demonstrates that ‘education systems benefit from clear and concise profiles of what teachers are expected to know and be able to do in specific subject areas. Such profiles can guide initial teacher education, teacher certification, teachers’ on-going evaluation, professional development and career advancement, and also help assess the extent to which these different elements are effective’.⁴⁶ In Myanmar, these ‘clear and precise profiles’ are currently being defined (the teacher competency standard framework) but it is not yet clear how these will be regulated and assured.

Teacher licencing is one of the mechanisms used in other countries to help assure teaching standards. The **USA** is an example of where teachers have to have a licence to teach and have to renew their licence at certain intervals to demonstrate they still meet the set standards. The USA has a federated education system, but although the state-level requirements vary slightly they all follow the same basic principle. In Colorado, for example a teacher has to renew their licence every five years, during which they have to complete 90 hours of professional development to remain up-to-date in their teaching practices:

“A valid professional license may be renewed every five years with an equivalent of six semester hours of credit from an accepted, regionally accredited college or university, which may include up to 90 clock hours of professional development earned during the validity (from the issuance date to the expiration date) of your professional license. Accepted renewal

⁴⁴ The Teachers and Educational Personnel Council Act B.E. 2546, enacted on 12 June B.E. 2546, mandates that all Professional Educators, namely Teachers, Educational Institution Administrators and Education Administrators and Other Educational Personnel designated in the ministerial regulations must have a license to practice in the profession

⁴⁵ Philippines, Education for All 2015 National Review. unesdoc.unesco.org/images/0023/002303/230331e.pdf

⁴⁶ 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
<https://www2.ed.gov/about/inits/ed/international/background.pdf>

activities include: in-service education, college/university coursework, involvement in school reform, internships, travel, and ongoing professional development”.⁴⁷

High-performing education systems emphasise the importance of on-going in-service training to maintain standards. The OECD recognises that: “no matter how good the pre-service education for teachers is, it cannot be expected to prepare teachers for all the challenges they will face throughout their careers....continuous professional development is needed to update skills and knowledge in a range of ways”.⁴⁸ In Myanmar, much work has already gone into an education strategy framework to link pre and in-service training⁴⁹ as well as into developing the teacher competency standards framework that maps the expectations of a teacher at the beginning of their career (newly trained) through to experienced, expert and then leader as they develop through experience and further professional development. Again, as seen in the examples above there needs to be an entity responsible for assuring these standards.

England, UK provides an example of how government schoolteachers are expected to complete a year of teaching in a school before they receive their qualification.⁵⁰ This is referred to as either mandatory probation or, as in England, statutory induction. Statutory means it is a legislated requirement. Statutory induction is described as “the bridge between initial teacher training and a career in teaching.... The programme should support the newly qualified teacher (NQT) in demonstrating that their performance against the relevant standards is satisfactory by the end of the period and equip them with the tools to be an effective and successful teacher”.⁵¹

Scotland, UK also provides a one-year probationary period called the Teacher Induction Scheme. Again this is a one-year compulsory training post that has to be completed by teacher graduates before they become fully registered teachers. During this induction year, new teachers work an 80% week and are mentored and monitored by either a trained mentor teacher in their school, the Head Teacher or a specifically trained ‘advisory teacher’. The UNESCO Teacher Policy Development Guide recommends a ‘probationary period’ as an ideal environment for a teacher to further “develop the knowledge skills and attitudes developed during the initial training with support from mentors who are experienced teachers”.⁵²

The training pathways available to student teachers varies across the different country examples but can be broadly defined as a mix of concurrent (studying subject matter and pedagogy as part of one course e.g. a B.Ed.) or consecutive (studying a specific subject matter to degree level and then completing a course in pedagogy).⁵³ This mix provides a range of flexible routes to encourage good candidates to join the profession.⁵⁴

⁴⁷ http://www.cde.state.co.us/cdeprof/licensure_renewalapp

⁴⁸ OECD (2009) *Creating Effective Teaching and Learning Environments* p.49

⁴⁹ Hardman, F. et al. (2013). *Development of a Teacher Education Strategy Framework Linked to Pre and In-Service Teacher Training in Myanmar*, UNICEF Myanmar.

⁵⁰ Among 26 OECD countries and partner economies for which comparable information is available, teachers have a mandatory probation period in 16 countries. OECD (2007) *Education at a Glance 2007 OECD Indicators* p.394 [It should be noted that this is now likely to be higher but more recent analysis is not available]

⁵¹ Department for Education, England (Revised 2015) *Induction for Newly Qualified Teachers (England) Statutory guidance for appropriate bodies, head teachers, school staff and governing bodies* p.6

⁵² UNESCO (2015). *Teacher Policy Development Guide*, UNESCO, Paris. p. 21

⁵³ World Bank (2012). *What matters most in teacher policies* p.4

⁵⁴ According to OECD analysis, high-quality pre-service teacher education systems offer ‘more flexible structures....opening up new routes into the teaching career, without compromising the rigor of traditional routes’. 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

The average length of undergraduate programmes is four years, resulting in a degree qualification. The shorter diplomas offered are normally post-graduate entry level only (consecutive model). Table 6 below compares Myanmar with example programmes offered in seven example countries. This highlights how the length of time it takes to qualify as a primary school teacher in Myanmar is currently below the international benchmark.

Table 6: Example programmes offered in other countries

Country	Example programmes offered	Length of course	Entry requirement	Options to specialise	Length of practicum
Myanmar	D.TEd (Primary and Middle)	2 years	High school certificate	No	45 days
Vietnam	Diploma	2 years	High school certificate	No	
Indonesia	S1 degree (higher ed. Degree)	4 years		Yes	
	D4 degree (diploma)	4 years		Yes	
	Online distance learning				
Thailand	B. Ed	5 years	High school certificate	Yes	1 year
	B. Ed in either Educational Technology or Industrial Technology to qualify as lab assistants	4 years	High school certificate	Yes	
Singapore	Diploma in Education	2 years	2+ GCE 'A' Levels & 1 month relevant experience	Yes	50-75 days
	BA (Ed) BSc (Ed) B.Ed. (Primary)	4 years	2+ GCE 'A' Levels & 2 GCE 'AO' Levels	Yes	110 days
Australia	B.Ed. (Hons)	4 years	High school certificate	Yes	Min. of 60 days
	Masters of Education	2 years	BA	Yes	Min. of 60 days
Scotland	Professional Graduate Diploma in Education (PGDE)	36 weeks plus a year-long probationary period	University degree	Separate diplomas: primary & secondary	Min. of 18 weeks (90 days)
	BA (Hons) Primary	4 years plus, a year-long probationary period	High school certificate	Yes	1 year (in Year 3)
Philippines	B.Ed. Early Childhood Ed	4 years	High school (4 th year) card	Yes	30-100 days
	B.Ed. in Elementary Ed		80%+ in English, Science & Maths, passes in all other subjects		
	B.Ed. in Secondary Ed				

4.2. Curriculum Structure

This section looks at how and why different countries have structured their own curriculums to include specific learning areas and approaches to delivering teacher education. The evident trend is a clear move towards emphasising the practical component of teacher training and getting student teachers to master teaching competencies i.e. the *skills* and *disposition* to use their *knowledge* to support their pupils to effectively learn:

“Many countries have moved their initial teacher education programs 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 programs, teachers get into classrooms earlier, spend more time there and get more and better support in the process”.⁵⁵

The balance between theory and practice is critical in structuring a curriculum for teacher education. Teachers need to be trained on what to teach (subject matter knowledge) and how to teach (pedagogical knowledge). There is also a third knowledge type that combines these and looks at how to teach specific content. This is referred to as ‘pedagogical content knowledge’.⁵⁶ Teacher education programmes are increasingly emphasising the importance of this latter knowledge and look at how to provide this ‘combined’ knowledge through more integrated approaches, which emphasise practice. A UK report looking at the evidence underpinning the question “what makes great teachers?” claims there is *strong evidence* that teachers with pedagogical content knowledge have a direct impact on student outcomes”.⁵⁷

The following table provides a comparison of how the curriculum for teacher education is structured in different countries. It clearly demonstrates the integration of theory and practice.

Table 7: Subject areas across Myanmar, Singapore, Australia and Scotland

Different subject areas across three countries				
Myanmar	Singapore	Australia	Scotland	Commentary
Training Subjects Age-relevant methodology and content.	Curriculum Studies Methods and techniques of teaching their chosen subject(s)	Curriculum Studies Knowledge and skills to become an effective educator	Pedagogy and Curriculum Content (elective subjects) teaching approaches and the use of assessment	All countries integrate content with actual methodology (theory and knowledge praxis) In Singapore and Scotland, the content is focused on an elective subject.
Academic Subjects Content knowledge to degree level across all subjects	Subject Knowledge for one elected subject(s)			The inclusion of advanced-level academics is not included in other countries per se; this is only seen in areas of specialisation (1 to 2 subjects)
Co-Curriculum Subjects				Co-curriculum subjects are not a separate subject area in other

⁵⁵ 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

⁵⁶ Shulman, L. S. (1986). *Those who understand: Knowledge growth in teaching*. Educational Researcher, 15(2)

⁵⁷ Coe, R et al. (2014) *What makes great teaching? Review of the underpinning research*. The Sutton Trust

Content knowledge				countries but feature as an area to specialise in.
	Education Studies Key concepts and principles of education needed for effective, reflective teaching	Education Studies Theoretical foundations of education	Educational Studies Principles underlying the work of all teachers	All other countries have a separate subject area on education theory; in Myanmar this is just one subject with the broader subject area of ‘training’.
	Language Enhancement Focus on communication skills for their teaching needs			Recognising the issue of different languages, Singapore includes a specific subject area on developing language skills.
Teaching Practicum School based teaching practice	Teaching Practicum Significantly weighted in the overall grade for the diploma/ degree course	Professional Studies/ Placement Professional identity and professional experience	Professional Experience and Practice On-campus teaching and learning, and placement experience in schools	All countries have a subject area focused on practicum. - Singapore prescribes significant weighting to the practicum - Scotland and Australia include a more reflective element on developing professional identity as part of their practicum.

As seen in Table 7, only Myanmar commits time in their curriculum to developing academic prowess. In the other examples, it is only where student teachers specialise in a subject area, that they are expected to study to degree-level standard. For those specialising in primary school teaching, where they are expected to have knowledge in all subjects (generalists) the content they learn is targeted to the level they will teach. The general paradigm followed in terms of getting the right balance between theory and practice is that student teachers should be confident in whatever is relevant for them to teach effectively. Often this translates into mastering subject matter concepts to a level one above that which they need to teach i.e. primary school teachers confident in middle school level content. The important factor is that they are competent in taking subject matter content and translating it in a way that is relevant and engaging for the learner.

The extract below describes the importance of integrating theory and practice. It is taken from an article analysing effective teacher strategies:

“A love of the material and a willingness to convey that to students only enhances learning. The problem occurs when the content matters more than anything else.

When teachers think the best way to improve their teaching is by developing their content knowledge, they end up with sophisticated levels of knowledge, but they have only simplistic instructional methods to convey that material. To imagine that content matters more than process, is to imagine that the car is more important than the road; both are essential. What we teach and how we teach it are inextricably linked and very much dependent on one another.

The best teachers are not always, not even usually, those teachers with the most sophisticated content knowledge. The best teachers do know their material, but they also know extensively

about the importance of process. They have at their disposal a repertoire of instructional methods, strategies, and approaches - a repertoire they continually cultivate, just as they develop content knowledge".⁵⁸

In the **Philippines** the integration of content knowledge and pedagogic development was established as the central aim of both pre-service and in-service teacher training in the early 1990s. "The Third Elementary Education Project (TEEP) was a mass training for elementary school teachers nationwide, intended to enrich elementary teachers' knowledge in both the content and strategies".⁵⁹

Singapore's education system has gone through significant development over the past 50 years. The current phase of the reform, the '*Thinking Schools, Learning Nation*' programme, focuses on what the workforce actually require, such as habits of mind, values, attitudes and skills. Therefore, the curriculum now focuses on developing more creative and innovative individuals. In 2004, the '*Teach Less, Learn More*' initiative steered the teaching and learning away from rote learning and repetitive tasks to engender a deeper conceptual understanding and problem-based education system. The pre-service teacher-training curriculum is broad-based and flexible and produces newly qualified teachers with the knowledge and skills to educate students who will fit the needs of the future workforce.

An important component of balancing theory and practice is the role and significance given to practicum which is when student teachers get the opportunity to practice teaching and develop their competencies in real life classrooms. As seen in Table 6, the length of practicum in other countries is much greater than in Myanmar. There are also good examples evident in analysis of these countries of how to provide constructive supervision and feedback to students on their practice teaching. The international examples reviewed reveal two common practicum structures: a placement year at the end of a programme or like Myanmar's current structure, placement periods during the programme.

In **Thailand**, the minimum length for the practicum for all courses is one year⁶⁰; the fifth year of the Bachelor of Arts (BA) is spent teaching in schools with supervision and mentoring from the university.

In **Scotland, UK** the National Guidelines for Teacher Education Courses mandates a minimum of 18 weeks' practicum. In the Scottish BA programmes, the amount of practicum increases over the four years. The colleges and universities work with local authorities to establish working partnerships with schools. During the placements, the student teachers receive mentoring from both the school head teacher and university/college lecturer.

Table 8: Breakdown of practicum structure used in Scotland BA programme

Year	Scotland: Amount of time of practicum
Y1:	70 hours with children and/or young people aged 0-14 years in a community setting
Y2:	Regular school-based placements (Primary grades 1-3) closely linked to on-campus modules
Y3:	4-week placement in a nursery; 6-week placement in a Primary school (Primary grades 4-7)
Y4:	10 weeks' placement in a primary school at a stage of the student's choice

In **Australia**, the training institutes establish structured and mutually beneficial partnerships with schools to ensure effective practicum. These partnerships set criteria for professional experience across a range of classroom situations, and include mentoring and support for student teachers to

⁵⁸ *Content Knowledge: A Barrier to Teacher Development, The Teaching Professor, November, 2007.*

<http://www.facultyfocus.com/articles/effective-teaching-strategies/effective-teaching-strategies-the-importance-of-marrying-content-and-process/>

⁵⁹ <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan011545.pdf>

⁶⁰ Regulation of the Teachers' Council on Professional Standards and Ethics (Thailand)

continually reflect on their own practice.⁶¹

In **Singapore**, the teaching practicum plays a strong and effective role in linking theory and practice. Throughout the student teachers' practicum, they complete observation, reflection and teaching assistant tasks that link theory and practice. Student teachers apply their knowledge and skills to their observations and teaching practice and develop their teaching competencies in a variety of contexts and at different school levels within primary/secondary. Schools and the training institution work closely together to support, mentor, guide, and supervise the student teachers. Within the school, the student teachers are mentored by a School Co-ordinating Mentor and a Co-operating Teacher, as well as a training institution- based Supervisor. Student teachers are trained to become well-informed, competent and reflective educationalists. They gain a practical understanding of the key concepts and principles of teaching and learning and are able to implement, analyse and theorise on key instructional processes.

Table 9: Breakdown of practicum structure used in Singapore BA programmes

Year	Singapore: Amount of time of practicum
Y1	1-week observing primary lessons; 1-week observing secondary lessons
Y2	5-weeks placement in specialisation track: as a Teaching Assistant
Y3	5-weeks (TP1) beginning to plan/teach/develop resources independently
Y4	10-weeks (TP2) increasing independence in teaching role

In the **Philippines**, the teaching practicum varies between the different training institutions and courses. At the Central Luzon State University/Open University provides a good example of a well-managed six-week teaching practicum. The first week requires the student teacher to observe a Cooperating Teacher from the teaching practice school. The Cooperating teacher mentors and guides the student teacher throughout this period, contributing to the individual's development and training process. The Cooperating Teacher regularly observes the student teacher's teaching, the minimum being once a week. Conferences are conducted after each observation to discuss strengths, areas for improvement, and ways to develop. The Cooperating Teacher writes their comments and observations in a suggestions book for the student teacher's reference. Two formal appraisals are then conducted towards the end of the practicum and submitted to the training institution. Further to this, there are two scheduled observations conducted by a Supervisor from the institution. The Supervisor's assessment, the Cooperating Teacher's evaluation, along with the student teacher's portfolio of their teaching practice experience and their reflections on their teaching performance and development, is submitted for the grading of the practicum.

In **England, UK** one of the most popular teacher training courses is the post-graduate certificate in education (PGCE). This course is delivered through various models, but it is often predominantly school-based training. This means student teachers (graduates) are placed directly in schools and learn 'on the job'. This is referred to as SCITT (School Centred Initial Teacher Training).⁶² It is normally a one-year practical training course, delivered through a network of accredited schools. The programme varies in different schools but the general model is four days of supported teaching practice and observation and one day of theory-based learning either in a school or back in the training institution (university or college).

4.2.1. Specialist pathways

The analysis of international courses highlights the importance of teachers gaining specialist knowledge. The programmes listed in Table 6 are not only longer in duration, but also have less

⁶¹ Teacher Education Ministerial Advisory Group (2014). *Action Now: Classroom Ready Teachers*, Australia

⁶² <https://getintoteaching.education.gov.uk/explore-my-options/school-led-training/scitt>

content to fit into the timetable as they offer options to specialise. In Myanmar, other than the diploma and degree distinction demarcating primary and middle from high school level teaching, there are currently no options to specialise.

The benefit of specialising is that it recognises the differences in relevant teaching approaches, and develops expertise. Teacher education courses can offer specialisation tracks in the following:

- An **education level** (e.g. primary school level): this recognises the different pedagogies appropriate for different age groups in line with a child’s cognitive development and recognises each level as a distinct area rather than a progressive, hierarchical structure from primary through to high school (e.g. the ladder system)
- A **specific subject area** (e.g. a chemistry teacher): this allows teachers the time to develop an in-depth knowledge of a subject they are interested in
- A **specialist area** (e.g. special needs or post-conflict): this develops experts who can provide targeted support to specific issues

Specialising in an education level is the most common and arguably most important specialist track in designing teacher education for primary and middle school aged children. A key concern raised in international research is the knock-on impact of low quality teaching in lower grades of learning. Teachers need to be specifically trained in early learning (specifically literacy and numeracy) to provide the basic foundations for on-going learning:

“Very poor levels of learning at lower grades of primary school are resulting in millions of children leaving education before acquiring basic skills. Children who have not learnt 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”.⁶³

The following provides different examples of how other countries provide options to specialise. One of the key considerations in offering specialist options is resource constraints (specialisms require more teacher educators and more classroom space etc.) and more complicated deployment logistics.

In **Thailand**, all courses share a common core curriculum and then provide a choice of subjects to major in or complete as electives. The core curriculum is made up of general education and teacher professional courses and makes up 76 of the required 160 credits needed to qualify (47.5%)⁶⁴. The content of the core curriculum is prescribed centrally by the Higher Education Committee (Ministry of Education). In addition to the core curriculum, the student teacher can then choose a subject to major in (which needs to constitute no less than 78 credits, 49%) and a number of additional electives (not less than 6 credits).

In **Scotland, UK** in the four-year BA Hons programmes, Year 1 students study education along with two other subjects and then in Year 2 and 3, specialise further before selecting a single specialist area in Year 4. The subject areas offered each year are demand driven i.e. they reflect the shortages of subject-matter teachers in the country. At the University of Edinburgh,⁶⁵ two of the three programme objectives for their primary school teacher qualifications highlight the integral importance of offering specialised courses:

⁶³ Education for All Monitoring Report and UNESCO Institute for Statistics (2013). Addressing the Crisis in Early Grade Teaching. Policy Paper 07, UNESCO, Paris

⁶⁴ A credit relates to a notional 3 hours of study unit equivalent to 1 hour of instruction, 1 hour of practice and 1 hour of private study

⁶⁵ Moray House College of Education, University of Edinburgh, Scotland

- Have in-depth understanding and expertise in a discipline other than education.
- Have a deep knowledge and understanding of learning, and of children as individual learners, and the pedagogies associated with the primary curriculum.

In **Australia**, student teachers can specialise in early childhood, primary or secondary or in a combination of two areas. The programmes provide the skills and knowledge appropriate to the specialisation. They clearly differentiate between the pedagogy needed for teaching children and that needed for adolescents. Primary school student teachers study all subjects but have to specialise in English and literacy, mathematics and numeracy or language training. Student teachers also have the option of a double degree, where in addition to education, they complete a second subject-matter degree. Australia's teacher education system also provides an example of where teachers can specialise in techniques to meet the needs of pupils with learning difficulties.

In **Indonesia**, student teachers can specialise in multiple different options. A good example is the Universitas Pendidikan, Indonesia (UPI). UPI focuses only on education-related studies and is made up of seven different faculties, each with a number of different departments within. Student teachers have options to specialise within subject areas or within educational science. In the Department of Pedagogy, there is a separate programme for studying primary school teacher education.

In **Vietnam**, student teachers attend a different institution depending on which education level they will teach. This is similar to Myanmar in that primary and middle school teachers attend colleges, while high school teachers qualify with a degree from university. Vietnam is an interesting comparative example as they are also undergoing a comprehensive reform to improve quality of learning and share a focus on teacher education reform.

In **Singapore**, student teachers can choose from an extensive variety of diploma and degree courses with specific subject specialisations, as well as a specific programme for Special Education. The student teachers can specialise in primary or secondary education and in the degree courses the first teaching practicum consists of five days' classroom observations in primary and five days' classroom observation in secondary, giving the student teachers some first-hand experience to assist in informing their choice of school level. Within each course there are general electives, which are related to the course the student teacher has chosen. Examples from across the courses include: Chinese Calligraphy, Early Childhood Education, Curriculum Design, Children's Literature, Introduction to Entrepreneurship, Singapore in Asia, Women in History, Islam and Malay Society, Statistics Around Us, Classic Guitar, Green Chemistry, Physics of Gemstones.

In the **Philippines**, each training institution offers a broad selection of Bachelor degrees. Student teachers can specialise either in Early Childhood Education, Elementary Education or Secondary Education. Within each field there are then further options for subject specialisation. Specialisations range from the usual scope of subjects through to Special Education, Religious and Values Education to Social Studies. There are eight B.Sc. Education degrees specialising in subjects such as Psychology (Guidance and Counselling) and Library and Information Science.

In terms of actual subject selection, the research raised a number of key areas to be considered. A key learning from the review is the importance of linking the teacher education curriculum to what is being taught in schools. The subject matter content taught to the student teachers should be directly relevant in order to get them 'classroom ready'.

Literacy and numeracy are critical to further learning. Primary school teachers need to master the ability to teach children the critical skills of reading, writing and basic arithmetic. Recent studies

analysing the reasons behind low learning outcomes highlight the importance of children being able to establish these foundational learning blocks at an early age. Further research also highlighted the importance of literacy recovery, in which later-stage teachers (in Myanmar’s case, middle schools) are able to support older pupils in retrospectively becoming literate.

ICT is now seen as a critical subject area. This is important in building the student teachers’ confidence in using new technologies in the classroom themselves and for accessing online professional development courses and teaching resources. ICT is not a compulsory subject in any of the course programmes reviewed but where the infrastructure allows, ICT is being integrated as a teaching method. UPI (Indonesia) prides itself on their Internet speed because of the inter-campus interaction and access to further teaching resources that it provides. An interesting component that needs to be considered in terms of accessing online information is the language barrier. The majority of online content is in English; there are currently very few Myanmar language teaching and learning resources. English proficiency therefore needs to be considered as a tool to access the opportunities made available through ICT.

The development of non-cognitive skills, in line with the 21st century skills agenda is another subject area to consider incorporating. 21st century skills are those less-cognitive skills deemed necessary to meet the demands of the 21st century such as communication, creativity, collaboration, problem solving and critical thinking. In other countries this is seen in the emphasis on self-reflection and professional identity. In **Scotland, UK** for example, one of the programmes now includes a three-day residential out-door experience aimed at developing the non-cognitive skills of teamwork and confidence. This also includes the important skill of communication and the broader issue of language skills. **Singapore**, which has an English-based bilingual education system (either Mandarin, Malay or Tamil depending) includes ‘Language Enhancement’ as one of their five subject areas. Good communication is critical to good teaching and this becomes particularly poignant in countries where there are multi-lingual classrooms and children whose mother tongue is not the medium of instruction.

The last consideration in terms of subject selection is making sure the curriculum is relevant to the local context. SABER’s Teacher Policy Development Guide highlights the importance of targeting the content of a teacher-training programme to the local context. The local context is used to align to the national education policies and specific classroom issues such as language policies.⁶⁶

4.3. Resources, Methodology and Assessment

A curriculum framework outlines the broad learning outcomes and the structure of the learning environment. This then should provide the direction on how to develop a detailed course curriculum and the subject specific syllabuses. The textbooks and teaching learning materials should then be developed as teaching tools within the classrooms. In addition to student textbooks, many countries also produce separate teachers’ guides for the teacher educators. Similar to a schoolteacher guide, this is a reference on content and how to train student teachers to teach.

Studies analysing approaches to improving learning outcomes, reflect the pedagogic shift from teacher centric towards learner centric. In terms of learning theories, this pedagogic shift can be described as a move from the behaviourist theory of learning to a more constructivist theory of

⁶⁶ UNESCO (2015). *Teacher Policy Development Guide*, UNESCO, Paris. P.21 SABER stands for ‘Systems Approach for Better Education Results. It is a World Bank initiative that has produced a framework for building more effective teaching professions. In addition to the framework, SABER carries out country specific analysis and is currently carrying out an analysis of Myanmar’s teacher policies. (See references)

learning, which sees the individual learner as the active constructor of their own knowledge. The pedagogical emphasis in the latter is on practical interactive and reflective lessons, with instructional material including more project-based activities, problem-solving worksheets and formative assessment techniques. In **Indonesia** for example, the recent 2013 curriculum framework included more varied formative assessments, including peer and self-assessments, portfolios of course work and oral presentations. A teacher in **Vietnam** reflecting on the new pedagogies introduced in the current Vietnam education reforms, describes how ‘textbooks and the curriculum should be considered as blueprints, based upon which a teacher should provide bricks, cement, doors, hinges, etc., and students should then be able to build their “houses” under the supervision of the teacher’⁶⁷.

A 2013 literature review based on identifying which pedagogic practices most effectively support students learn concluded that “use of communicative strategies encourages pedagogic practices that are interactive in nature, and is more likely to impact on student learning outcomes and hence be effective”⁶⁸. This review document identified three useful and insightful strategies that promote interactive pedagogies:

1. Feedback, sustained attention and inclusion
2. Creating a safe environment in which students are supported in their learning
3. Drawing on student’s backgrounds and experiences

The review continues to outline six effective teaching practices, which used “together as a package in a carefully constructed curriculum ... might make a considerable impact on student learning”:

1. Flexible use of whole-class, group and pair work where students discuss a shared task; ☐
2. Frequent and relevant use of learning materials beyond the textbook; ☐
3. Open and closed questioning, expanding responses, encouraging student questioning; ☐
4. Demonstration and explanation, drawing on sound pedagogical content knowledge; ☐
5. Use of local languages and code switching; and, ☐
6. Planning and varying lesson sequences. ☐

A useful term used to describe one of the approaches to more constructivist teaching is ‘scaffolded learning’. This term represents the support structure the teacher provides for the pupil to then construct a deep knowledge base; each new concept building on from the previous one. The recent K-12 curriculum reform in the **Philippines**, applied this basic concept in how they designed their ‘spiral curriculum’⁶⁹. A spiral curriculum is where students are initially introduced to basic concepts that are then repeatedly revisited each semester/each year, each time adding increasingly complex concepts. It follows the theory that learning is more effective when new concepts are connected with prior knowledge and understanding develops in a spiral progression. The concept is based on the work of Jerome Bruner who claims that⁷⁰:

⁶⁷ UNESCO (2015) *Transforming Teaching and Learning in Asia and the Pacific Case Studies from Seven Countries*, UNESCO Paris. p.141

⁶⁸ Westbrooke et al. (2013). p.1

⁶⁹ SEAMEO INNOTECH. (2012). K to 12 Toolkit: Reference Guide for Teacher Educators, School Administrators and Teachers. Quezon City: Philippines.

⁷⁰ The concept of a spiral curriculum is based on the work of Jerome.S.Bruner, an educationalist in the 1960s. According to a 2012 publication looking at how this theory works in practice the benefits ascribed to the spiral curriculum by its advocates are: (1) The information is reinforced and solidified each time the student revisits the subject matter; (2) The spiral curriculum also allows a logical progression from simplistic ideas to complicated ideas; and (3) Students are encouraged to apply the early knowledge to later course objectives. Although there is no clear empirical evidence of the overall effects of the spiral curriculum on student learning, "features" of that curriculum have been linked to improved learning outcomes. In addition, the spiral curriculum incorporates many research-based approaches from cognitive science that have been linked,

“A curriculum as it develops should revisit the basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them”.⁷¹

A further insight into current international trends is the importance of developing reflective practitioners and how this can be incorporated into a curriculum. Self-reflection and how this helps student teachers develop their own teaching practice is a core consideration for teacher education programmes:

“Challenging and changing beliefs and classroom practices requires the development of self-regulatory skills that enable students and teachers to monitor and reflect on the effectiveness of the changes they make to their classroom practice. Such change appears to be promoted by a cyclical process of professional learning in which teachers have their current assumptions challenged by the demonstration of effective practice, develop new knowledge and skills, make small changes to practice aided by classroom observation, and observe resulting improvements in student learning outcomes”.⁷²

The Philippines provides a good regional example of how reflective practice can be integrated. Each teacher in the **Philippines** is expected to reflect on their Individual Plan for Professional Development in the context of how this can be aligned to the School’s Plan for Development. During teacher training they are trained to reflect on their own practice to plan how this can influence the wider learning community. The ultimate aim is to produce a responsible curriculum, both in the teacher training institutions and within the school system, so as to empower learners for their future careers and continued professional development.⁷³

Research skills are being seen as an increasingly important method in training effective teachers. This is evidenced in **Finland**, which according to OECD PISA (Programme for International Student Assessment) analysis is amongst the highest performing education systems. In Finland all teachers have to have a Masters qualification and therefore have completed a research-based dissertation:

“The fundamental purpose of the research-based teacher preparation program is to develop the teacher education students’ capabilities to operate as autonomous professionals in the field who are able to ‘think and act on the basis of theory and research, and to justify educational decisions using formal, systematic arguments”.⁷⁴

Not only does research-based preparation help teachers develop effective and innovative teaching methods, but as the OECD point out, giving teachers responsibility as professionals and leaders in reform can help raise status and attract good candidates through non-financial incentives.⁷⁵

The practical focus of an integrated curriculum structure is also reflected in how student teachers are now being assessed. Several countries in the region, including **Singapore** and **Australia** have moved

individually, to improved student performance as well. Johnston, H. (2012) *The Spiral Curriculum*. Research in Practice, Education Partnerships Inc. (EPI) <http://eric.ed.gov/?id=ED538282>

⁷¹ Bruner, J.S (1960/1977) *The Process of Education* Harvard University Press, USA p.13

⁷² Hardman, F. et al. (2013). *Development of a Teacher Education Strategy Framework Linked to Pre and In-Service Teacher Training in Myanmar*, UNICEF Myanmar p.7

⁷³ This reform was part of the Third Elementary Education Project (TEEP) (see footnote above) <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan011545.pdf>

⁷⁴ Westbury, I., Hanse, S-E., Kansanen, P., & Björkvist, O. (2005). Teacher education for research based practice in expanded roles: Finland’s experience. *Scandinavian Journal of Educational Research*, 49(5),

⁷⁵ OECD (2011) *Building a High-Quality Teaching Profession Lessons from around the world*, Background Report for the International Summit on the Teaching Profession p.5

towards ‘authentic assessment’. Authentic assessment recognises that teaching is a complex activity and student teachers need to be assessed on how they integrate theory and practice. A research report looking at trends in regional assessment practices identified that *‘there was widespread support for strengthening assessment practices and adopting authentic forms of assessment that integrated theory and practice. There was also support for assessment focused on higher-order skills and concomitantly there was no support for extending tests of basic skills and knowledge. This was seen as a potential driver of low-level content in teacher education programs. Related to this view was the preference for more holistic forms of assessment that captured the complexity of teaching rather than piecemeal tasks’*.⁷⁶

5. RECOMMENDED OPTIONS ANALYSIS

The review of the curriculum documentation highlights a number of key areas that need to be addressed in the new curriculum frameworks to strengthen the quality of pre-service teacher education.

Despite the emphasis on the words *train and produce* in the list of six EC objectives, the current curriculum and structure in the ECs remains predominantly transmission based. It teaches content rather than training new teachers in the competencies needed to be classroom ready. A significant reason behind this focus on content over competencies is the current promotion system that perpetuates a hierarchy from primary school up to high school. This system mandates further studies. As a means to preparing new teachers for this latter study requirement, the EC curriculum includes subjects and academic levels beyond what is relevant to teaching in the classroom. The result is that the curriculum is congested and the training methodology is compromised. Time is spent preparing student teachers for further study at expense of preparing them to be ‘classroom ready’. This undermines the overall effectiveness of the curriculum.

The key strength identified in this review is the integrated approach of training students how to teach content in the training subjects. This approach needs to be adopted more extensively going forward.

Informed by research into international best practice, the following analysis suggests a series of recommended options to address each area. Again the structure of a curriculum framework is used to present the options; the structure is intended to help stakeholders think critically about how best to modernise and improve Myanmar’s education provision.

5.1. Option considerations for the curriculum frameworks

Educational Policy Statements	
Summary of key review findings	There is no teacher education policy in Myanmar that defines specific goals and expectations of the teacher education system. The National Education Law (2014) is currently the main documented directive.
Recommendations informed by international best practice	1. A teacher education policy should be introduced based on national aspirations for the development of its human capital. If trained effectively, new teachers will make a lasting impact on their students; the impact of this will multiply as the next generation of teachers and students grow in experience and establish their contributions to national development.

⁷⁶ University of Queensland, School of Education, Teaching & Educational Development Institute and School of Human Movement Studies (2012) *An investigation of best practice in evidence-based assessment within pre-service teacher education programs and other professions*, Queensland College of Teachers p.2

	2. Clear teacher education goals in line with national priorities should be set that acknowledge and incorporate the realities of current schooling in Myanmar and the national development agenda.
Considerations	<p>The transition from the old government to the new will likely involve a period of flux and reorganisation, and the potential impacts of this fluidity should be anticipated.</p> <p>Key documents to consider: National Education Law (2014)- amended 2015; 30 Year Education Plan (2001 to 2031); Framework for Economic and Social Reforms (FESR) (2012-15)</p>

Statement of Broad Learning Objectives and Outcomes

Summary of key review findings	<p>There are currently no formalised statements of learning objectives but the Basic Education curriculum framework (2015) provides a temporary basis while the curriculum for Basic Education undergoes a reform and the MoE is currently drafting a teacher competency standard framework. There are also prescribed objectives for the ECs.</p> <p>There is no designated regulatory body responsible for designing or assuring teacher-specific standards. This weakens accountability to meet prescribed standards.</p>
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. The learning objectives and outcomes need to reflect the national objectives (which needs to be prescribed at policy level). This needs to be reflected in what is taught in Basic Education schools and in the teacher education curriculum. 2. Teachers need a set of agreed learning objectives and outcomes to provide a structure to their learning. This should span pre-service and in-service training 3. The current Education College objectives should be updated to reflect the current reforms towards modernising the education system. These should be common standards shared between the Education Colleges and the University of Education. 4. A regulatory body is needed to define and assure standards that connect what is being taught in schools (the basic education curriculum) to the training teachers receive.
Considerations	<p>Key documents to consider:</p> <ol style="list-style-type: none"> 1. Draft Teacher Competency Standards 2. Basic Education Curriculum Framework 3. Education College objectives

Structure of the Teacher Education System

Summary of key review findings	<p>A two-year training course is too short a time period to adequately equip a high school graduate with the knowledge, skills and attitude needed in a classroom.</p> <p>The lack of a degree-level qualification for primary and middle school creates a hierarchy within the different education levels, with high school teachers highly regarded and better paid. This 'ladder system' undermines teaching quality in primary school.</p> <p>There are no linked continuing professional development opportunities.</p>
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	Having one Ministry department responsible for Basic Education schools and another for teacher education creates an operational fissure that undermines opportunities for teachers to practice.
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. As per the policy level discussions, a four-year degree-level qualification for primary and middle school is being proposed. The different education levels should be recognised as equal in status and should be reflected in pay and promotion. This will raise the status of teachers and importantly it will prevent the loss of experienced teachers from primary and middle schools through the current system of ‘upward’ promotion (ladder system). 2. A four-year course will align Myanmar’s teaching profession with international standards. 3. The agreed learning objectives and outcomes (aligned to the Teacher Competency Standards) should be used as the framework to link pre-service training and continuous professional development opportunities (in-service training). 4. The Teacher Education Policy should be used as the policy mechanism to regulate activities across Ministry departments. The DBE should have a focal person solely assigned to support Education Colleges interact with schools. 5. Introduce entry requirements for degree-level to raise the calibre of applicants (currently the entry-level for the diploma is simply passing matriculation).
Considerations	<p>Care needs to be taken to ensure that the increased length of pre-service training does not create a teacher deficit.</p> <p>Implications on the current bridge programme and whether this will affect teacher numbers at High School level.</p>

Structure of curriculum content, learning areas and subjects	
Summary of key findings	<p>There are no options to specialise; this means teachers cannot develop expertise in a particular age-level, subject or niche.</p> <p>The academic subjects are primarily to prepare student teachers for later degree-level study rather than for classroom. They expect an advanced level of comprehension beyond what is required for a primary and middle school teacher. This extraneous agenda overcrowds the curriculum and compromises methodology and ‘teacher readiness’.</p> <p>Inadequate management and monitoring of ‘bloc teaching’ (practicum) denies student teachers the opportunity to gain practical experience.</p>
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. Specialist track options should be offered for primary and middle school teachers. This will ensure teachers are trained effectively in age-appropriate content and pedagogy. As teaching becomes increasingly learner-centric, pedagogies need to target learners’ specific needs. Specialisation will also decongest the overcrowded curriculum. 2. Student teachers should have the option to study specific subjects. The subject choices on offer should tie in with national aspirations such as increasing the number of language specialists or science teachers. The choices on offer should also be demand led with electives offered based on specific subject matter teachers that need in a particular state/region.

	<ol style="list-style-type: none"> 3. The current subject areas should be re-structured in order to emphasise that the main purpose of a college is to instruct teachers how to teach in a classroom setting. 4. Student teachers should have more supervised opportunities to put theory into practice before they start their careers. 5. New, more flexible modes of integrating practicum should be introduced in the diploma and the degree. This should include short-term placements in local ‘partner schools’. 6. The assessment system should be restructured to focus on competencies through assessment of practical demonstrations.
Considerations	<p>Care needs to be taken to ensure that the increased length of pre-service training does not create a teacher deficit.</p> <p>Creative ideas are needed in how to create the space and motivation necessary for a deeper level of reflection and engagement.</p> <p>Additional workload in developing a level-specific curriculum framework, content and instructional materials.</p> <p>Implications of specialisation training on post-primary schools (Grade 1-8), which might require an additional mixed programme.</p>

Standards of resources required for implementation	
Summary of key findings	<p>There is a missed opportunity in helping create ‘teacher readiness’ by underutilising the EC’s existing practicing schools and making use of the local schools in the surrounding community.</p> <p>The textbooks are used as more than just a functional learning reference, and in the absence of a documented curriculum provide the teaching structure.</p>
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. Integrating learning opportunities using the practicing schools should be introduced 2. There should be a re-examination of the role of textbooks and the extent to which trainers/teachers should be developing their own materials. 3. Teacher educator instructional material aimed at teaching adult learners should be developed. These materials should directly reflect the learning objectives laid out in the teacher education curriculum framework. Emphasis should be on more interactive and reflective lessons, with instructional material including more activities and problem-solving worksheets and formative assessment techniques. 4. The textbooks need to align and be developed alongside the Basic Education curriculum reforms. The textbooks should use real example lessons from the Basic Education curricula. 5. The teaching learning resources should be expanded to include textbooks, detailed teacher educator guides and supplementary materials such as reference books, worksheets, or templates and if possible augmented by other media, such as audio or video.

	6. Academic textbooks should be in a language relevant to what supports the most effective learning in the classroom. The language needs to be understood by the students in order to reduce time spent translating in the classroom.
Considerations	Logistics of how to increase student teacher time in practicing schools without compromising quality of teaching for the pupils. The language and mode of delivery of relevant course content.

Teaching methodology

Summary of key findings	There is a good level of integrating grade-specific content with age-appropriate methodology in the training and co-curricular subjects. This is not evident in the academic subjects. The dominant teaching style is lecture-based which restricts learning to ‘knowledge transmission’ The congested curriculum and overcrowded classrooms compromise the methodology.
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Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. The curriculum should be decongested by: offering specialisation, reducing the compulsory subjects, extending duration to a four-year programme (as mentioned above). 2. Moving from a ‘knowledge transmission’ model to an ‘active engagement’ model and incorporating higher order thinking and interactive teaching strategies 3. The time made available should be used to enhance the student teachers’ time for: <ol style="list-style-type: none"> iv) Self-reflection v) Teaching demonstrations and micro-teaching vi) Classroom practice and observation time in practicing and partner schools
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Assessing student achievement

Summary of key findings	The knowledge transmission-based teaching approach results in a focus on assessing retention of knowledge, rather than its application.
Recommendations informed by international best practice	<ol style="list-style-type: none"> 1. Development of clear lesson objectives 2. Development of success criteria and assessment for learning activities 3. The formative assessment techniques to inform choices and activities in the classroom 4. Practices such as portfolio-work where students can learn and reflect on good pedagogical practice should be introduced 5. Introducing a course-end competency-based assessment should be explored internally as part of the EC assessment system. This would help assure quality standards and provide a link to on-going in-service training.

5.2. Guidance on implementing curriculum reform

A systemic change such as a curriculum reform is a complex endeavour with many inter-related components to consider. The development of a new curriculum framework for teacher training represents important first steps on the journey of educational reform.

The key consideration is to ensure there is adequate capacity amongst the TEs to be able to adapt to the changes and effectively implement the new curriculum against the expected objectives. This component of curriculum reform will be addressed in a subsequent phase of this consultancy; based on a needs analysis, a number of professional development modules will be developed and trialled in the TEs from the ECs.

In order to engender ownership of change it is critical to include the TEs in the change process. The study on 'Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries' 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'

To help address this risk, in Myanmar a reference group comprising two teacher educators from each of the Education Colleges was established and first met in early February 2016 to discuss the work to date on the curriculum review. This group of teacher educators is referred to as the Education College Curriculum Core team. It will be critical that this team continue to play an active role.

There will need to be an agreed common language and shared understanding of how successful teaching and learning is developed and assessed, against a rapidly changing landscape. As seen in the international comparative analysis, there is an educational shift, away from the transmission of knowledge, towards the application of skills. This means the introduction of new concepts and new terminology. An effective way of approaching this would be to include the TEs in the development of sample material that reflect the new changes. This would make the changes tangible and visible.

A further component that needs to be considered is how to incentivise teachers to change. The student centred approach to teaching could be misconstrued as disempowering the role of the teacher. This misconception would not help the objective of increasing the status of the teacher. There will need to be clear communication about how teacher status should reflect learning outcomes not authority.

During the current period of transition and the system-wide reforms being discussed it is important the framework remains fluid and can respond to related change. This is specifically relevant in terms of changes to the Basic Education curriculum reforms.

Once the curriculum frameworks are established, the next step will be the longer-term piece of work in developing the curriculum itself and the subject matter syllabuses. All of these will need to be integrated with the in-service teacher training, that will help build on this foundation to establish professional learning communities throughout the Education Colleges and the schools they are working with.

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7. ANNEXES

Annex 1: High-level summary of current teacher education related initiatives

Initiative	Focus area	Objective	Key outputs to date
UNESCO	Strengthening Pre-service Teacher Education in Myanmar (STEM)	Improved pre-service teacher education system through policy and institutional capacity development	<ol style="list-style-type: none"> 1. Framework for ICT development in Education Colleges 2. Assessment of pedagogical practice and practical teaching experiences in ECs 3. Draft Teacher Competency and Standards Framework 4. EC management review report
JICA	New primary school curriculum and textbooks focused on adopting a child-centred approach	Integrate new primary school curriculum into D.TEd curriculum through textbook edits and trainings	
British Council and VSO	English for Education College Trainers (EfECT)	Improve English language proficiency and methodology training in ECs	Two native English trainers in each of the 22 ECs and UoEs
UNICEF (QBEP)	School-based In-service Teacher Education (SITE)	Provide a framework for school-based professional development through a blended learning approach	One module implemented in 17 townships with over 4,000 teachers and 1,000 head teachers participating
ADB	New secondary school curriculum	Develop a new secondary school curriculum	
World Bank, Australia DFAT, and Denmark	Additional financing for in-service teacher mentorship programme	Support in-service teachers through the provision of township-based mentors	Project currently in design stage

Annex 2: Basic Education Curriculum Framework

Summary of curriculum framework for primary and middle school:

School	Curriculum structure	Teaching and learning approaches	Types of assessment
Primary School	<p>10 learning areas. Myanmar, English, Mathematics, Science, Social Studies, Physical Education, Life Skills, Aesthetics, Moral and Civics and Local Curriculum</p> <p>Lower primary: 840 hrs per year Upper primary: 960 hrs per year</p> <p>Local curriculum not more than 5 periods per week and 120 hours per year</p>	<p><i>Focus on child centred approach:</i></p> <ul style="list-style-type: none"> • Create a supportive learning environment • Encourage reflective thought and action • Enhance the relevance of new learning • Facilitate shared learning • Make connections to prior learning and experience • Provide sufficient opportunities to learn • Inquire into the teaching-learning relationship 	<p>Classroom-level assessment (formative)</p> <p>School-level assessment (end of term and end of year exams)</p> <p>Assessment at the completion of each basic education level</p> <p>National level assessment</p>
Middle School	<p>11 learning areas: (same as above but social studies are split into history and geography)</p> <p>Focus on 21st century skills</p> <p>1080 instructional hours per year</p> <p>Local curriculum not more than 4 periods per week and 180 hours per year</p>	<p><i>Focus on competency-based approach:</i></p> <p>Teachers to be selective in their use of a variety of teaching methods as appropriate to each subject and lesson</p>	(same as above)

Annex 3: Subject Area Analysis

Subject area analysis									
YEAR 1					YEAR 2				
Academic Subjects	Teachers hours per week	Language of Textbook	Language of examination	Language of assessment	Academic Subjects	Teachers hours per week	Language of Textbook	Language of examination	Language of assessment
1. Myanmar					1. Myanmar				
(b) Pinyin Myanmar	1.5	Myanmar	Myanmar	Myanmar	(b) Pin Yin Myanmar	1.5	Myanmar	Myanmar	Myanmar
2. English	1.5	English	English	English	2. English	1.5	English	English	English
3. Mathematics	1.5	English	English	English	3. Mathematics	1.5	English	English	English
4. Physics	1.5	English	English	English	4. Physics	1.5	English	English	English
(a) Practical Physics	1.5	English	English	English	(a) Practical Physics	1.5	English	English	English
5. Chemistry	1.5	English	English	English	5. Chemistry	1.5	English	English	English
(a) Practical Chemistry	1.5	English	English	English	(a) Practical Chemistry	1.5	English	English	English
6. Biology	1.5	English	English	English	6. Biology	1.5	English	English	English
(a) Experimental Biology	1.5	English	English	English	(a) Experimental Biology	1.5	English	English	English
7. Geography	1.5	English	English	English	7. Geography	1.5	English	English	English
(a) Practical Geography	1.5	English	English	English	(a) Practical Geography	1.5	English	English	English
8. History					8. History				
(a) World History	1.5	English	English	English	(a) World History	1.5	English	English	English
(b) Myanmar History	1.5	English	English	English	(b) Myanmar History	1.5	English	English	English
9. Economics	1.5	English	English	English	9. Economics	1.5	English	English	English
(a) IT Communication	1.5	English	English	English	(a) IT Communication	1.5	English	English	English
Total	22.5	per week			Total	22.5	per week		

Training Subjects	Teachers hours per week	Language of Textbook	Language of examination	Language of assessment	Academic Subjects	Teachers hours per week	Language of Textbook	Language of examination	Language of assessment
YEAR 1					YEAR 2				
1. Education Theory	2.25	Myanmar	Myanmar	Myanmar	1. Education Theory	2.25	Myanmar	Myanmar	Myanmar
2. Educational Psychology	2.25	Myanmar	Myanmar	Myanmar	2. Educational Psychology	2.25	Myanmar	Myanmar	Myanmar
3. Myanmar Language	2.25	Myanmar	Myanmar	Myanmar	3. Myanmar Language	2.25	Myanmar	Myanmar	Myanmar
4. English Language	2.25	English	English	English	4. English Language	2.25	English	English	English
5. Mathematics	2.25	Myanmar	Myanmar	Myanmar	5. Mathematics	2.25	Myanmar	Myanmar	Myanmar
6. Basic and General Science	2.25	Myanmar	Myanmar	Myanmar	6. Basic and General Science	2.25	Myanmar	Myanmar	Myanmar
7. History	2.25	Myanmar	Myanmar	Myanmar	7. History	2.25	Myanmar	Myanmar	Myanmar
8. Geography	2.25	Myanmar	Myanmar	Myanmar	8. Geography	2.25	Myanmar	Myanmar	Myanmar
Total	18	per week			Total	18	per week		
Co-Curricula Subjects	Teachers hours per week	Language of Textbook	Language of examination	Language of assessment	Academic Subjects	Teachers hours per week	Language of Textbook	Language of examination	Language of assessment
YEAR 1					YEAR 2				
1. Agriculture	1.5	Myanmar	Myanmar	Myanmar	1. Agriculture	1.5	Myanmar	Myanmar	Myanmar
2. Music and Dancing	1.5	Myanmar	Myanmar	Myanmar	2. Music and Dancing	1.5	Myanmar	Myanmar	Myanmar
3. Fine Arts	1.5	Myanmar	Myanmar	Myanmar	3. Fine Arts	1.5	Myanmar	Myanmar	Myanmar
4. Industrial Arts & Domestic Science					4. Industrial Arts & Domestic Science				
(a) Industrial Arts (m)	1.5	Myanmar	Myanmar	Myanmar	(a) Industrial Arts	1.5	Myanmar	Myanmar	Myanmar
(b) Domestic Science (f)	1.5	Myanmar	Myanmar	Myanmar	(b) Domestic Science	1.5	Myanmar	Myanmar	Myanmar
5. Physical Education	1.5	Myanmar	Myanmar	Myanmar	5. Physical Education	1.5	Myanmar	Myanmar	Myanmar
Total	9	per week			Total	9	per week		

Annex 4: Textbook Analysis

First Year Textbook Analysis					Second Year Textbook Analysis				
YEAR 1					YEAR 2				
Academic Subjects	Date Reviewed	Language of Textbook	Overall Objectives	Chapter Objectives	Academic Subjects	Date Reviewed	Language of Textbook	Overall Objectives	Chapter Objectives
1. Myanmar					1. Myanmar				
(b) Pinyin Myanmar	1998	Myanmar	No	Yes	(b) Pin Yin Myanmar	1998	Myanmar	No	Yes
2. English	1998	English	No	Yes	2. English	1998	English	No	Yes
3. Mathematics	1998	English	No	Yes	3. Mathematics	1998	English	No	Yes
4. Physics	1998	English	No		4. Physics	1998	English	No	
(a) Practical Physics	1998	English	No		(a) Practical Physics	1998	English	No	Yes
5. Chemistry	2007	English	No		5. Chemistry	2007	English	No	
(a) Practical Chemistry	2007	English	No		(a) Practical Chemistry	2007	English	No	
6. Biology	1998	English	No		6. Biology	1998	English	No	
(a) Experimental Biology	1998	English	Yes	Yes	(a) Experimental Biology	1998	English	No	No
7. Geography	2007	English	Yes	No	7. Geography	2007	English	Yes	Yes
(a) Practical Geography	2007	English	Yes	No	(a) Practical Geography	2007	English	Yes	No
8. History	2007	English			8. History	2007	English	No	
(a) World History	2007	English	No		(a) World History	2007	English		
(b) Myanmar History	2007	English	No		(b) Myanmar History	2007	English		
9. Economics	2007	English	No	No	9. Economics	2007	English	No	Yes
(a) IT Communication	2005	English	No		(a) IT Communication	2005	English	No	

Training Subjects	Date Reviewed	Language of Textbook	Overall Objectives	Chapter Objectives	Training Subjects	Date Reviewed	Language of Textbook	Overall Objectives	Chapter Objectives
1. Education Theory	2007	Myanmar	No	Yes	1. Education Theory	2007	Myanmar	Yes	Yes
2. Educational Psychology	2007	Myanmar	No	Yes	2. Educational Psychology	2007	Myanmar	No	Yes
3. Myanmar Language	1998	Myanmar	No	Yes	3. Myanmar Language	2007	Myanmar	Yes	Yes
4. English Language	1998	English	Yes	Yes	4. English Language	1998	English	Yes	Yes
5. Mathematics	2010	Myanmar	Yes	Yes	5. Mathematics	2010	Myanmar	Yes	Yes
6. Basic and General Science	2010	Myanmar	Yes	Yes	6. Basic and General Science	2010	Myanmar	Yes	Yes
7. History	2007	Myanmar	Yes	Yes	7. History	2007	Myanmar	Yes	Yes
8. Geography	2007	Myanmar	Yes	Yes	8. Geography	2010	Myanmar	Yes	Yes
Co-Curricula Subjects	Date Reviewed	Language of Textbook	Overall Objectives	Chapter Objectives	Co-Curricula Subjects	Date Reviewed	Language of Textbook	Overall Objectives	Chapter Objectives
1. Agriculture	1998	Myanmar	Yes	Yes	1. Agriculture	1998	Myanmar	Yes	Yes
2. Music and Dancing	1998	Myanmar	Yes	Yes	2. Music and Dancing	1998	Myanmar	Yes	Yes
3. Fine Arts	1998	Myanmar	Yes	Yes	3. Fine Arts	1998	Myanmar	Yes	Yes
4. Industrial Arts & Domestic Science					4. Industrial Arts & Domestic Science				
(a) Industrial Arts (m)	2007	Myanmar	No	Yes	(a) Industrial Arts	2007	Myanmar	Yes	Yes
(b) Domestic Science (f)	1998	Myanmar	Yes	Yes	(b) Domestic Science	1998	Myanmar	Yes	Yes
5. Physical Education	1998	Myanmar	No	Yes	5. Physical Education	1998	Myanmar	No	Yes