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For the Ministry of Education

Asian Development Bank

Myanmar Comprehensive Education Sector Review (CESR)
Phase 2: In-Depth Analysis

TECHNICAL ANNEX ON
SECONDARY TEACHER EDUCATION AND CONTINUING
PROFESSIONAL DEVELOPMENT

FINAL VERSION, 14 October 2014

(Minor refinements from 16 February 2014 Draft)

Foreword

This report was prepared as part of the In-Depth Analysis (Phase 2) of Myanmar's Comprehensive Education Sector Review (CESR), which is led by the Union of Myanmar Ministry of Education (MOE), coordinating inputs from other government agencies and support from an array of development partners. The report serves as a Technical Annex to the compilation "Volume 2" for CESR Phase 2. Under the umbrella of the CESR, the analysis reported herein was principally supported by two Asian Development Bank (ADB) technical assistance projects (TA 8187-MYA: Support for Education Sector Planning and TA 8385-MYA: Support for Post-Primary Education Development) both of which are co-financed by the Government of Australia (represented by Australian Aid) and incorporates additional inputs by ADB staff.

This report expands on the findings and recommendations of the CESR Phase 1 Rapid Assessment – including those reported in the CESR Phase 1 Technical Annex on the Secondary Education Subsector[1] - and presents an in-depth analysis of Myanmar's secondary teacher education and continuing professional development. The findings and recommendations are based on stakeholder consultation, a survey of the two Institutes of Education and the University for Development of National Races, and further analysis of available data and information from MOE and DBEs.

While the report was principally drafted by TA 8187 and TA 8385 consultants Marion Young, Daw Khin Than Nwe Soe, Daw Ei Phyu and Daw Shwe Zin Mon Aung, it reflects a collaborative effort involving inputs from the CESR Team throughout the process (including in particular Daw Tin Tin Shu, U Tin Hlaing, U Win Pe, Daw Phyo Ma Ma Hein, Daw Moe Thandar Tun, Daw Su Su Htay and Daw Aye Aye Myint). The report is also guided by advice from ADB staff Chris Spohr.

The report also reflects discussions with other ADB-mobilized consultants supporting CESR Phases 1 and 2 (in alphabetical order, Nigel Billany, Carsten Huttemeier and Marcus Powell). It also benefited significantly from dialogue with counterparts from Australian Aid and UNICEF (which are supporting overall CESR coordination), as well as other development partners supporting the CESR including UNICEF, JICA, and UNESCO. Guidance and support from CESR international advisors (Julian Watson, Eric Woods and Peter Mogensen) is also greatly appreciated.

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[1] See http://www.adb.org/projects/documents/cesr-p1-rapid-assessment-annex-secondary-education- tacr

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ABBREVIATIONS

ADB   Asian Development Bank
AY   Academic Year   (in Myanmar context : June-April)
BEHS   Basic Education High School
BEMS   Basic Education Middle School
BEPPS   Basic Education Post Primary School
BEPS   Basic Education Primary School
CCA   Child Centered Approach
CESR   Comprehensive Education Sector Review
CFS   Child Friendly Schools
CPD   Continuous Professional Development
DBE   Department of Basic Education
DEPT   Department of Education, Planning and Training
DHE   Department of Higher Education
EC   Education College
EMIS   Education Management Information System
HE   Higher Education
HS   High School
IHLCS   Integrated Household Living Conditions Survey 2009-10 (Myanmar)
IOE   Institute of Education
JAT   Junior Assistant Teacher
MOE   Ministry of Education
MORA   Ministry of Religious Affairs
MS   Middle School
PPE   Post Primary Education
PS   Primary School
SAT   Senior Assistant Teacher
SE   Secondary Education
SES   Secondary Education Sector
TEO   Township Education Office
TVET   Technical and vocational education and training
UDNR   University of Development of National Races

EXECUTIVE SUMMARY

1. The Myanmar CESR Phase 2 In-Depth Analysis of Secondary Teacher Education and Continuing Professional Development (May to December 2013) provides further evidence on the issues and recommendations identified in CESR Phase1.

2. The key issues for secondary teacher education identified in CESR Phase 1 were the need for:

    (i)   alignment of pre-service and In-service teacher education programs with the new secondary school curriculum content, pedagogy and assessment methods to prepare secondary school teachers for implementation of the new curriculum reforms as they are introduced into schools;

    (ii) improved data collection and analysis of teacher supply and deployment of teachers to ensure that the system is more efficient and equitable in future.

    (iii) preparation of a capacity development plan to provide opportunity to teacher educators, school leaders, subject leaders and CPD leaders and mentors to gain new skills and approaches to upgrade teaching quality and learning outcomes in secondary schools.

3. This review, supported by ADB/AusAID focuses specifically on secondary teacher education. A survey was conducted at IOE and UDNR to gather information on institutional management, quality of teaching and learning, and continuing professional development programs for teacher educators and professors. A SES school survey was also conducted which provides further evidence relating to teacher qualification, deployment and CPD. In parallel with this review of secondary teacher education other in-depth reviews of teacher education include policy and strategy (UNESCO), a survey of Education Colleges (UNICEF) and teacher education systems (JICA).

4. There is a shortage in supply of secondary school teachers and this is anticipated to increase as enrolment in middle and high school increases. The capacity of the IOEs will need to expand to meet future projected teacher demand. Aligned to this there is inequitable deployment of teachers to schools with rural schools underserved and schools generally facing a mismatch in the supply of teachers by subjects required. It is recommended that the system of teacher supply (initial training, recruitment and deployment) is strengthened and matched to demand, alongside improved methods of projection, quality assurance and performance monitoring.

5. The process of curriculum development in teacher education will need to be closely aligned with the new secondary school curriculum development, incorporating new pedagogical and assessment approaches. Teacher educators and professors will need to be familiarised with the new curriculum through capacity development programs.

6. The decisions to be made as part of the CESR process regarding use of English as the medium of instruction in secondary schools will have an impact on language of instruction in secondary teacher education. If the decision is made to teach mathematics and sciencesto high school students in Myanmar language in future then the IOE and UDNR policy on language of instruction will need to be reviewed. If the decision is made to continue using English as the medium of instruction in secondary teacher education then the program of improving English language competency of teacher educators, professors and student teachers will be a priority.

7. Restructuring of the secondary education system will have an impact on tertiary level education with potentially two zero years of graduates from high school ready to enrol in pre-service teacher education programs, one year when grade 12 is introduced and a second zero year one year before the first KG cohort graduates . Also, when the KG-12 structure is fully implemented high school graduates will be two years older than the current 16 year olds and it follows that 5 year B.Ed students will graduate aged 23 years old. There is a cost implication for students.

8. Career pathways for teacher educators, student teachers and head teachers should be reviewed under the various sub-components of CESR to ensure that progression and promotion can be made within a school level based on experience and performance and with equal recognition given to teachers specialising in each school level and subject. Similarly for teacher educators and head teachers there should be a system of recognition and progression within each school level. For professors and heads of department it will be important for them to have experience and understanding of the new pedagogy and assessment methods as they apply to the subject specialism. Subject expertise alone is not sufficient.

9. Continuing professional development of teacher educators, professors, heads of department, head teachers and teachers is recognised as being an essential requirement in the process of implementing both the school and teacher education curriculum reforms. The challenge will be in the capacity of the system to develop the in-service and CPD programs and in providing teams of trainers able to implement in-service and CPD to the scale that will be required.

10. At present there are no common standards operational between IOEs and ECs on curriculum, assessment, CPD, staffing, academic affairs, performance management and quality assurance procedures. Quality standards and quality assurance mechanisms need to be strengthened in secondary teacher education including establishment of common core standards and procedures for performance monitoring.

11. A summary of the recommendations and a proposed outline timeframe for implementation of the recommendations is given in Annex 1a and Annex 1b.

1   TEACHER EDUCATION AND CONTINUOUS PROFESSIONAL DEVELOPMENT

1.   The CESR Phase 1 report identified the following areas related to Secondary School Teacher Education to be further investigated in Phase 2:

(i)   An in-depth study of the system of pre-service and in-service teacher training for secondary school teachers (by subject) to identify subject areas to be strengthened aligned to the curriculum reform process and planned restructuring of the education system.

(ii)   Further detailed analysis of secondary school teacher qualification and deployment by school type, by subject, by school size, gender and urban/rural differences is needed to address disparities in teacher supply across regions.

(iii)   A review of regional and international examples of best practice in pre-service and in-service education including CPD models

2.   Section 1.1 provides an overview of policy as it relates to Secondary Teacher Education in Myanmar, including consideration of equitable deployment of teachers to secondary schools, the need for common standards and curriculum between Institutes of Education, comparison of practice in implementation of the intended secondary education curriculum and pedagogy between the training institutes and classroom practice in secondary schools, and the requirement for CPD among staff in the institutes. Section 1.2 provides some baseline indicators of secondary teacher education. In section 1.3 some relevant international comparisons are presented with details and references provided in Annex 3 to 7. The findings and recommendations from an in-depth study of the Yangon Institute of Education, Sagaing Institute of Education and the Univeristy for Development of National Races (UDNR) are reported in section 1.4 including entry level criteria, review of alignment of the teacher education curriculum with the secondary school curriculum and common core curriculum, teaching and assessment methodology practiced in IOEs, use of English as the medium of instruction, CPD and quality assurance procedures in teacher education.

3.   For ease of readership, in any reference to the Secondary Teacher Education analysis throughout this report "Teacher Educator" refers to lecturers, associate lecturers, tutors and demonstrators, and "Professor" refers to professors, associate professors and Heads of Department. It should be noted that not all Heads of Department are Professors.

4.   Table 1 provides a summary of the recommendations given in the MOE CESR Phase 1 report aligned with the Phase 2 In-Depth Analysis and points for consideration in formulation of the CESR Phase 3 Comprehensive Education Sector Plan.

Table 1   CESR Phase 1 Secondary Teacher Education Recommendations relevant to IOE and UDNR programs, aligned to CESR Phase 2 in-depth analysis and CESR Phase 3 CESP

CESR Phase 1 Recommendation	CESR Phase 2 In-Depth Analysis	CESR Phase 3 CESP
Formulate a firm and precise comprehensive Teacher Education Policy and enact necessary laws	T.Ed survey analysis confirms weak policy and no common standards between IOEs and UDNR.	Teacher Education Policy formulation and reform
In Institute of Education's selection policy, instead of looking at the earned marks only, consider aptitude and attitude test and arrange a	Identification of IOE entrance criteria to consider subject specialism, teacher competency / aptitude for direct entry to MS and HS on graduation	Review and revision of entry level criteria and career guidance for aspiring teachers. Opportunity to train and graduate for direct entrance to

CESR Phase 1 Recommendation	CESR Phase 2 In-Depth Analysis	CESR Phase 3 CESP
personal interview before the final selection.		each level. Higher or equivalent status given to PS teachers as to HS teachers.
Deployment is satisfactory on a nation-wide basis. However, data collection from Regions/States, Districts, Townships and Schools should be more systematic and teacher provision by subjects still needs to be studied	Indication that there is inequitable deployment to MS and HS by state / region (data from SES survey to be obtained later) and mismatch between subject teachers needed and deployed to schools.	System for equitable deployment of MS and HS teachers by subject requirements of the school. Projections of teacher supply/demand needed for future expanded secondary school system and projected increase in SES enrolments
Develop the competency based teacher education curriculum with the assistance of international consultants	Identified the need for competency based Teacher Education curriculum to be aligned with new secondary education curriculum with parallel capacity development of teachers, head teachers and teacher educators	Clarify / define competency based curriculum in Myanmar context as part of CF. Develop a strategy for implementation of CBL in teacher education programs and schools Pre-service and in-service training in CBL
Teacher Competency (draft) recognised as a basic competency framework for each level (fresher, experienced and skilled) is to be revised with the assistance of international consultants	Teacher competency aligned to T.Ed assessment and practicum, and incorporated in QA system for T.Ed – no common standard at present. No common system for CPD to strengthen teacher competencies	TA to support development of Teacher Competencies. Teacher Competencies implementation strategy
During the training, practise training and learning period should be upgraded to international standards, with more in-depth analysis in CESR Phase 2 to determine the length of study time necessary.	Insufficient practicum - schools do not provide examples of good practice for student teachers to model. international examples provided but strategy needed to move progressively towards new standards	Revise policy for practice teaching including increased time and improved assignments and methods of assessment
Curriculum and teaching methods should be modified to international particularly ASEAN standard, and Learner Centre Approach (LCA) used in teaching and to prepare lessons so as to achieve higher order thinking	Teacher centred approach used in all classroom observations. Little evidence of students demonstrating independent study skills and critical thinking. Future intakes from G12 will be 2 years older on entry and will graduate at age 23.	Develop curriculum and teaching methods aligned to secondary school curriculum framework Capacity development for teacher educators
Organise a school management	Lack of school head teacher	Develop strategy and

CESR Phase 1 Recommendation	CESR Phase 2 In-Depth Analysis	CESR Phase 3 CESP
course and an educational management course for principals and educational managers respectively Offer Orientation Courses for those who are promoted for the higher position	leadership and management training. System for recruitment / promotion of teachers to head teacher position based on years of experience / qualifications not on merit/performance and aptitude as leaders / educators. Head teacher role strongly biased to administration; lack of evidence of head teacher engagement in innovative school quality improvement	procedure for head teacher leadership and management training; orientation program for new and aspiring head teachers; strengthen school networks to provide professional support and CPD for head teachers; define school quality improvement as a key responsibility of the head teacher; include in QA of school performance.
Based on Academic and Education Degrees, Teacher Competency and Services rendered, practise a system of rankings promoted to Educationist (1),(2), and (3) at Primary, Lower Secondary and Upper Secondary levels	Process for initial qualification as MS and HS teacher and promotion to MS and HS head teacher should be reformed based on experience, aptitude, performance and qualification.	Revise Policy on teacher selection and promotion – career pathways for teachers at each level based on equivalent ranking system within each level.
To enhance Continuous Professional Development Program, establish an in-service teacher education unit at Education Colleges that provides in-service trainings based on a module learning system; give credits for each module and accredit completion by awarding a Diploma/ Master Degree. This innovative program should be for both Teacher Educators and Basic Education Teachers.	CPD for teacher educators is ad hoc and varies in quality and focus based on leadership of HOD and professors. There are some very good examples in practice and some departments where there is little attempt at CPD. CPD should be engaged in by staff at all levels including senior managers and professors demonstrating the importance of a learning culture for all.	Capacity development of CPD providers and facilitators. Policy and Strategy for CPD in teacher education institutions and schools based on the principal of engaging all staff as a team in CPD and bringing CPD to the institution / school or as close as possible to the institution / school. Link CPD to institution / school improvement and performance monitorin / QA.

1.1 POLICY (MISSION AND VISION) FOR TEACHER EDUCATION AND CONTINUING PROFESSIONAL DEVELOPMENT

5. **Secondary school teacher qualifications and deployment.** The UNESCO supported Phase 1 report on Education Policy and Legislation noted that there is a need to review policy and strategy for teacher deployment, teacher professional development and job descriptions for head teachers. This work has been undertaken by the teacher education team during CESR Phase 2 with support from UNESCO (Policy, Legislation and Management), UNICEF (Survey of Education Colleges) and JICA (Teacher Education systems). The ADB support to CESR Phase 2 Teacher Education sub-component is focused on an in-depth analysis of secondary teacher education including a survey of the two Institutes of Education and the University for Development of National Races (UDNR).

6. **Teacher deployment** is the responsibility of DBEs who provide the data for DEPT to appoint teachers to schools according to the vacancies reported from schools. The IOEs and UDNR inform the DBEs of the number of graduates each year. The MOE DHE has responsibility for decisions on the number of subject specialist teachers to be trained. UDNR and IOEs provide the graduate lists to MOE and DBEs for allocation of teachers to vacancies.

7. **The IOEs, UDNR and ECs** are line managed under three different ministries and departments. The IOEs come under MOE Department of Higher Education, UDNR is managed by the Ministry of Border Affairs and the ECs come under MOE DEPT. One of the consequences of this division is that there are no common standards. The IOE, UDNR and EC curriculum content is not aligned and there is no structured and coordinated system for collaboration on reform of the curriculum. There is no system for moderation between institutions to ensure equivalency of learning achievement. Staffing structures and budgeting also differ between IOEs/UDNR and ECs because they are under different line ministries and because the institutions do not have common operational standards.

8. **IOE and UDNR curriculum development process.** The Board of Studies (BOS) for each academic subject reviews the curriculum content for IOE and UDNR courses annually and makes minor changes to content through this process. IOEs are informed of the curriculum changes through a note from BOS. Assessment questions are set by univeristy professors and Heads of Departments are not included in this process. The curriculum content, pedagogy and assessment methods need further upgrading to meet international standards, in particular to enable the proposed introduction of a competency based curriculum.

9. **Class sizes for some core subjects** remain large despite the guidance of the Deputy Minister to limit class size in IOEs to 50-60 students. For the regular subjects in Yangon IOE the maximum is 90 and the minimum is 48 students in a class. In Sagaing IOE the range is 57 to 69 students in a class. In UDNR the range is 33-59 students in a class. The minimum in any IOE class at present is 3 students in a physical education and school health program.

10. **Assessment of Student Teachers**

    The Institutes of Education use a combination of examination and course work assessment in the following ratio:

    | B.Ed | Semester End examination | 80% |
    | | Course Work / Tutorials / Practicum | 20% |
    | M.Ed | Semester End examination | 70% |
    | | Course Work / Tutorials / Practicum | 30% |

11. UDNR has an system which includes monthly tests and practicum assessment scores based on the following table:

    Table 2 Allocation of Marks to Student Assessment in UDNR

	Training	Academic subjects	Co-Curricular subjects	Special Co-Curricular Subjects
Monthly Test	10	10	-	-
Assignment / Practical	10	10	60	60
Semester-End Tests	80	80	40	40

    Source: UDNR Handbook

The pass rates and grades for the 5 year B.Ed program at UDNR are shown below:

Raw Score	Grade number	Grade letter	Remark
75% and above	5	A	Excellent
65%-74%	4	B	Good
50%-64%	3	C	Pass
35%-49%	2	D	Fail
0%-34%	1	E	Fail

Source: UDNR Handbook

12. This system of assessment appears to some extent to be modelled on the practice of monthly and semester tests in secondary schools which, combined with the use of English as the medium of instruction, may further perpetuate the practice of rote learning and memorisation for some course components.

13. **English as the medium of instruction in IOE and UDNR.** The B.Ed and M.Ed programs are currently taught in English and all course books and examinations used in IOE and UDNR apart from Myanmar language are in English. All students study compulsory English and Myanmar classes in addition to their selected specialist subjects. Teacher educators and student teachers find use of English as the medium of instruction challenging due to a general low level of competency also observed in and continuing from secondary school. The use of English as the medium of instruction for science and mathematics in high school grades is still being debated. If the decision is revert to Myanmar language teaching in high school grades this will have implications for the standard of English of students entering the IOEs and UDNR and will likely increase their difficulties to study in English during the B.Ed and M.Ed programs.

14. **Impact of education system restructuring.** Diagram 1 shows the potential impact on tertiary level education and B.Ed teacher education of the proposed restructuring of the education system from 5-4-2 to KG-5-4-3. In future, with the additional high school grade 12 and roll through of KG, students graduating from high school will be 18 years old, 2 years older than the present grade 11 graduates. In addition the B.Ed course has been extended from 4 to 5 years in AY 2013/14. As a result, in future teachers who graduate from IOE will be 23 years old compared to 20 years old in the past.

15. As the extended high school and extended B.Ed program are rolled out there will be two years when there will be no graduates from high school entering IOE and UDNR first year classes (actual years impacted dependent on the year of introduction of the restructuring) though there may be matriculation graduates from the repeater group. There will be one year when there are no B.Ed graduates or fewer B.Ed graduates from IOE and UDNR entering high school teaching. For each of the two zero years, five years later at the end of the B.Ed cycle there will be no graduates or fewer graduates available to take up teaching posts.

DIAGRAM 3. PHASED INTRODUCTION OF THE NEW SCHOOL STRUCTURE - General to Tertiary Level Transition

	G10	G11	G12	B.Ed Yr 1	B.Ed Yr 2	B.Ed Yr 3	B.Ed Yr 4	B.Ed Yr 5	
2014/15	A10	A11							2014/15
2015/16	A9	A10							2015/16
2016/17	A8	A9							2016/17
2017/18	A7	A8		A9					2017/18
2018/19	A6	A7		A8	A9				2018/19
2019/20	A5	A6		A7	A8	A9			2019/20
2020/21	A4	A5	A6		A7	A8	A9		2020/21
2021/22	A3	A4	A5	A6		A7	A8	A9	2021/22
2022/23	A2	A3	A4	A5	A6		A7	A8	2022/23
2023/24	A1	A2	A3	A4	A5	A6		A7	2023/24
2024/25		A1	A2	A3	A4	A5	A6		2024/25
2025/26	B1		A1	A2	A3	A4	A5	A6	2025/26
2026/27		B1		A1	A2	A3	A4	A5	2026/27
2027/28			B1		A1	A2	A3	A4	2027/28
2028/29				B1		A1	A2	A3	2028/29
2029/30					B1		A1	A2	2029/30
2030/31						B1		A1	2030/31
2031/32							B1		2031/32
2032/33								B1	2032/33

Right-hand assumption table:

	KG	PS	MS	HS	Assumption
2015/16	X				Process starts SY2015/16 in KG
2016/17		x			Start new PS phase-in
2017/18		x	x		Start new MS phase-in
2018/19		x	x	x	Start new HS phase-in
2020/21		x	x	x	Process complete SY2020/21

Text boxes (annotations):
- Students graduate from G11 and enter B.Ed course at 16 years old / graduate at 21 years old
- No G11 graduates / Zero Year in tertiary / few B.Ed entrants
- G12 graduates enter B.Ed at 17 years old
- First batch B.Ed graduates age 22 years
- Zero Year KG through 12
- 1st Cohort complete KG-G12 / B.Ed entry at 18 years old
- First batch B.Ed graduates age 23 years

Batch A7-A9	B.Ed graduates at 21 years old
Batch A6-A1	B.Ed graduates at 22 years old
Batch B1 and later	B.Ed graduates at 23 years old

16. **Teacher Qualifications** Under the present system of teacher training for middle and high school teachers there are multiple entry criteria and pathways for qualification taking from 5 to 10+ years depending on initial entry point. The system is based on a system of being promoted up through the school levels based on teaching experience and additional qualifications.

Entry criteria and pathways to become a middle school teacher: IOE B.Ed graduates are qualified to teach in middle school as Junior Assistant Teachers (JAT). A primary school teacher with 5 years experience and after completion of the BA or BSc (distance education) course can apply to be appointed as a middle school teacher. Outstanding students studying the 2 year Diploma in Teacher Education (DTE) and the Diploma in Teacher Education Competency (DTEC) course for university graduates administred by the DEPT, there is a bridging track into the third year of the IOE BEd program. After one year as a primary school teacher plus a one year correspondence course a DTE graduate may be promoted to Junior Assistant Teacher (JAT) in a middle school. The IOEs also offer a Postgraduate Diploma in Teaching (PGDT) for students with subject specialist degrees. The Ministry of Border Affairs trains secondary school teachers in the UDNR B.Ed course.

Entry criteria and pathways to become a high school teacher: Middle school teachers with 2 years teaching experience are automatically eligible to apply to be appointed as high school teachers, dependent on vacancies.

Entry criteria and pathways to become a middle school head teacher: 7 years service/experience as SAT, then sit entrance exam. There is no training or guidelines available from MOE for orientation of middle school head teachers.

Entry criteria and pathways to be a high school head teacher: the person must have been a middle school head teacher for 2 years and be willing to accept an appointment at any location

17. **Career pathways.** The present career and promotion system encourages the perception that more years of experience and more qualifications are the main criteria needed to teach at the

next school level. Promotion is commonly understood as a process of moving up from primary school teacher to middle school teacher and middle school teacher to high school teacher. Similarly for head teacher promotion. Teacher pay and remuneration is also linked to the school levels. This system needs to be reviewed and reformed based not only on qualifications but on skills, competencies, interest, aptitude, experience and performance, using the QA system to identify the best performing teachers for promotion within a level rather than promotion up to the next level. More focus should be given to retaining the best teachers in lower primary grades and providing appropriate recognition of their value and importance through more equitable incentives at each level including incentives for remote and rural teachers, and recognition for best performing teachers at each level. Best performing teacher should be on a measure that is not linked to student test results but to broader indicators such as are listed in the Child Friendly Schools Quality Indicators (Annex 8). An international comparison of entry criteria and career pathways for teachers shows that there are pathways for school graduates and mature students to enter the teaching profession and that generally teachers opt for a level of teaching in which they remain for their career, with a range of options for promotion within that teaching level or sideways into teacher training or school management.

1.1.1 Pre-Service and In-Service / CPD

18. **Professional development of Teacher Educators and IOE/UDNR professional staff**. There is a lack of any specific policy in Myanmar relating to a statutory requirement for Teacher Educators to regularly and systematically upgrade their skills and knowledge through professional development programs. Each institution organises seminars and assignments for staff to upgrade their competencies on an ad hoc basis. Some professors have established a mentoring arrangement within their department including action research. In other departments there is little emphasis given to internally-driven on-going professional development and there is some evidence of resistance to or reluctance to change. In some cases this may be due to teacher educators not having had exposure to other systems and new approaches; in other cases it may be that teacher educators are satisfied that the existing system functions and cannot see a need to change their practice.. The differences appear to depend on the motivation and interest of individual professors and Heads of Department. In keeping with the observations of practice in secondary schools, the requirements of the examination system also contribute to the general reluctance to change and teacher educators are given little autonomy to change their practice.

19. **Entry Criteria for IOE Lecturers and Professors** There are no documented regulations for appointment to IOE as lecturer or professor. Appointment would be on the basis of seniority and qualification. Appointment of IOE tutors is based on Masters degree qualification and entrance examination. Those who pass the entrance examination are called for interview by the Rector. The DHE makes the decision on tutor appointments based on recommendations of the professors and the Rector. IOE education department tutors can be promoted between the IOEs. IOE academic tutors and demonstrators can be appointed from other universities. Entrance requirement for professors is PhD and seniority based on years of experience. The DHE makes the decision on appointments.

1.2 BASELINE STUDY OF SECONDARY SCHOOL TEACHER EDUCATION AND CONTINUING PROFESSIONAL DEVELOPMENT

1.2.1 Baseline and Key Indicators

20. The match of MS and HS teachers by subject specialism should be a baseline measure compared to the guidelines and instructions for deployment of teachers. More accurate data on teacher allocation in middle schools and high schools is needed mapping subjects taught against subject qualification. Analysis of the distribution of teachers by geographical location,

subject match, qualification and experience is needed to ensure that there is equitable allocation of teachers to schools throughout the country.

1.2.2   Baseline level of teacher supply and demand

21.   Projections of teacher supply and demand will be needed to address the current shortfall in supply of middle and high school teachers and in preparation for increasing middle and high school enrolment and expansion of high schools to Grade 12, disaggregated by secondary school subjects. The current formula for allocation of teachers to middle and high schools is as follows:

(A) For Post-Primary Schools   1.   < 230 pupils
Teachers required= 4 teachers
2.   > 230 pupils
Teachers required= (Total - 230)/ 50 x 1.7 + 4

(B) For Branch Middle Schools   1.   < 230 pupils
Teachers required= 5 teachers
2.   > 230 pupils
Teachers required= (Total - 230)/ 50 x 1.7 + 5

(C) For Branch High Schools, Middle Schools
1.   < 230 pupils
Teachers required = 7 teachers
2.   > 230 pupils
Teachers required= (Total - 230)/ 50 x 1.7 + 7

(D) For High School Level   1.   < 300 pupils
Teachers required = 12 teachers
2.   > 300 pupils
Teachers required= (Total - 300)/ 50 x 1.7 + 12

22.   There is currently no systematic process for monitoring allocation of secondary teachers to schools by subject specialism. Modification of guidelines and instructions on teacher deployment is needed both to streamline the system and to include as a component of Quality Assurance through monitoring of equitable allocation of teachers to schools.

23.   The student enrolment in the IOE B.Ed program for AY 2012/13 shows an increase of more than 40% in first year enrolment over previous years. The 3rd year bridging course students (those who have transferred to IOE from EC with high scores) has more than doubled the total number of 3rd year students. This may go someway to increasing the supply of new secondary school teachers in future but it is estimated that there will remain a shortfall in the supply of teachers at this level. The actual shortfall figure is not readily available from DEPT.

YIOE student enrolment AY 2012/13

Year	Section A	Section B	Section C	Section D	Section E	Section F	Section G	Total	
1st year	58	52	58	60	62	62	48	**400**	
2nd year	54	53	63	57	57			**284**	
3rd year - bridging from EC	89	82	88	90				**349**	**Total 3rd Yr**
3rd year -direct intake	66	63	64	63				**256**	**605**
4th year - bridging from EC	66	63	59	63				**251**	**Total 4th Yr**
4th year - direct intake	68	70	67	69				**274**	**525**

24.   Data on student enrolment by subject at YIOE shows the year by year subject increase with a large increase in the number of Myanmar subject teachers from Year 4 to Year 1 students and

an increase of nearly 50% in the number of student teachers specialising in mathematics, physics and economics.

**Number of Student Teachers enrolled in YIOE in AY 2012/13 by subject specialisation**

Subjects	1st Year	2nd Year	3rd Year (bridging from EC)	3rd Year (direct intake)	4th Year (bridging from EC)	4th Year (direct intake)
Myanmar	390	284	101	40	7	11
English (ELT)			66	61	69	64
Maths	390	284	181	155	175	199
English (ELP)	390	284	349	256	251	274
Chemistry	114	121	117	96	92	111
Physics	217	194	319	98	232	110
Biology	121	157	192	100	149	110
History	107	22	10	66	6	73
Geography	87	14	5	64		70
Economics	134	60	54	78	21	71
PT				10	3	3
Aspects of Myanmar	390					
Common Core Subjects						
Educational Theory	390	284	349	256	251	274
Educational Psychology	390	284	349	256	251	274
Educational Methodology	390	284	349	256	251	274

1.2.3   Baseline level of qualification of professors and lecturers

25.   **Gender balance between institutions and position held** A simple comparison of highest level of qualification held by male and female professors and lecturers combined indicates that female IOE teaching staff are slightly more likely to hold a higher level of qualification than males.
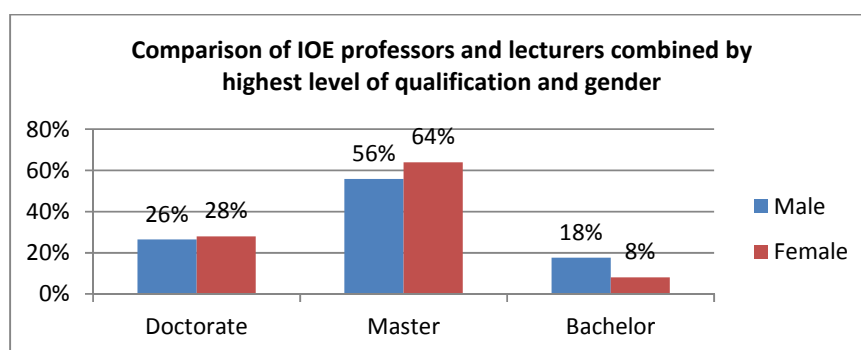
26.   **Comparison of professors and lecturers by institution and gender** In the following graph a comparison of professors and lecturers by institute and gender shows a variation between institutions in the highest level of qualification held. Of the 12 professors and 50 lecturers in the Sagaing IOE survey sample, there are more female to male lecturers and compared to other institutes a higher proportion of professors are male. Of the 17 professors and 47 lecturers in the Yangon IOE survey sample, almost two thirds of the females are professors

wheras only one fifth of the males are professors. Of the 18 professors and 55 lecturers sampled in UDNR has the highest proportion of female professors compared to other institutes and proportionately more male staff arelecturers than professors.

Comparison of Professors and Lecturers by Institute and Gender
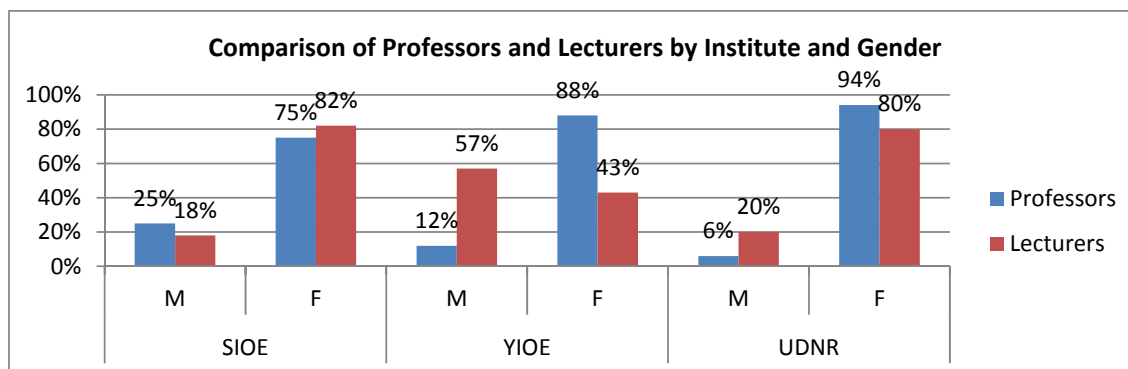
27. **Comparison of professors and lecturers by highest level of qualification** The next graph shows the comparison of professors and lecturers by highest level of qualification as would be expected with professors tending to hold the higher level qualifications.

Comparison of professors and lecturers by highest level of qualification held
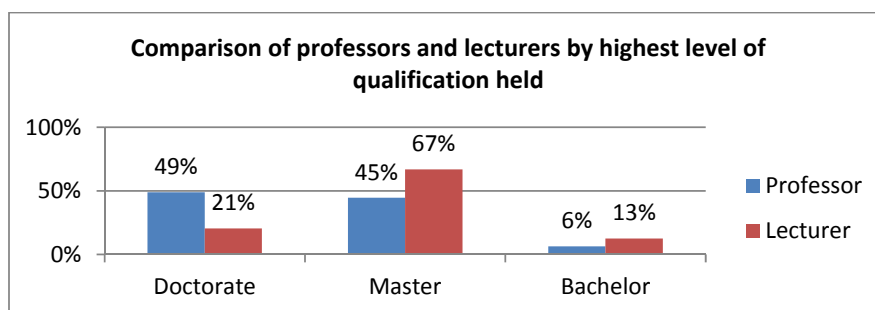
Clarification: in the above graph, and in the Secondary Education Survey it should be noted that not all Heads of Department are Professors. All professors hold a PhD whereas some Heads of Department hold PhD and others hold Masters degree.

28. **Comparison of professor and lecturer highest level of qualification by institute** Analysis of professor and lecturer highest level of qualification by institute shows that professors and lecturers in UDNR have a lower level of qualification than either of the IOEs. All professors and lecturers in the IOEs have at least Masters degree with a slightly higher proportion of Sagaing professors holding PhD and a high proportion (80%) of lecturers holding Masters degree compared to Yangon IOE.

Comparison of Professors and Lecturers by Institute and highest level of qualification
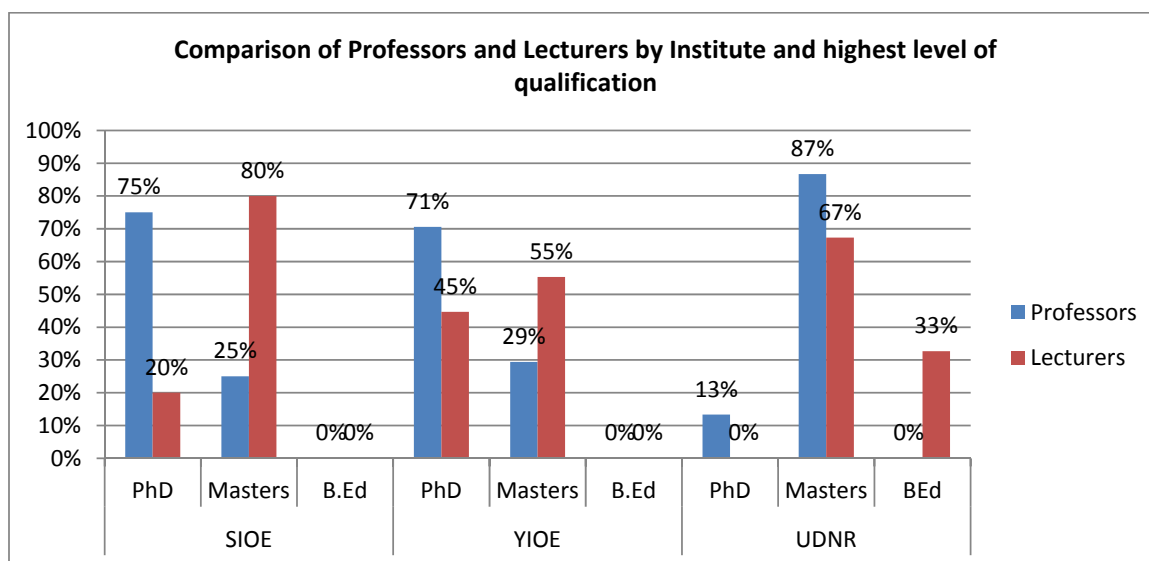
Baseline information on Professor and Lecturer use of time

29. Analysis of the average time spent by professors (Prof.Qu.25) and lecturers (Lect.Qu.5) on various tasks is shown in Table 3. Lecturers spend about 5.4% of their time on administration tasks whereas professors spend 20.5 percentage points more on these (i.e., around 25.9% of their time), and the difference is statistically significant (t > 2). As might be expected lecturers spend more of their time teaching and in tutorials with students than do lecturers, with lecturers spending, on average, approximately half of their time teaching. Professors and lecturers spend approximately the same proportion of their time in research, writing professional papers and undertaking student assessment.

Table 3   Comparison of average time useage between professors and lecturers (Prof.Qu.25 / Lect.Qu.5)

Activities	Professor use of time		Lecturer use of time			
	mean	S.D	mean	S.D	Significance	
Research	15.6	8.8	14.7	11.7	0.39	Not significant
Writing	12.8	5.3	10.8	6.7	1.36	Not significant
Teaching	**36.3**	14.2	**47.5**	12.1	**-5.11**	Significant
Tutorials	**11.9**	5.1	**20.1**	12.8	**-3.45**	Significant
Student Assessment	15.1	12.8	16.5	9.0	-0.77	Not significant
Administration	**25.9**	12.3	**5.4**	7.0	**13.97**	Significant

Time allocation to tasks by IOE Professors (mean scores) (Prof.Qu.25)

15.6 — Research
12.8 — Writing
36.3 — Teaching
11.9 — Tutorials
15.1 — Student Assessment
25.9 — Administration

Time allocation to tasks by IOE Lecturers (mean scores) (Lect.Qu.5)

14.7 — Research
10.8 — Writing
47.5 — Teaching
20.1 — Tutorials
16.5 — Student Assessment
5.4 — Administration
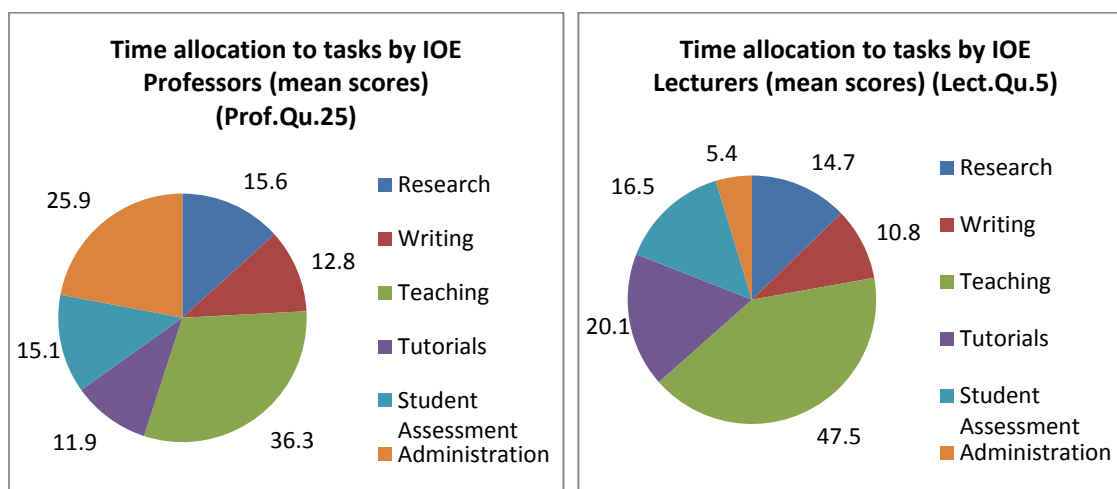
1.3 INTERNATIONAL COMPARATIVE STUDY

30. Examples from UK pre-service, in-service and CPD guidelines and statutory requirements for secondary school teacher qualifications were shared with the CESR team. Examples of course structures and systems of teacher appraisal were also shared. These resources need to be more widely disseminated and may be used as a reference point for upgrade and improvement to the existing quality assurance and appraisal systems. All such resources are readily accessible online through official government and institution websites.

31. Examples of quality assurance mechanisms include those used in the UK to monitor performance in initial teacher education and in awarding of qualified teacher status (QTS) to all teachers (Annex 3). This includes an outline of the entry criteria for teacher training and career pathways for secondary school teachers.

32. Examples of international best practice in CPD are provided in Annex 4.

33. Examples are provided of international best practice describing Standards of Teacher Education that are statutory requirements in UK (Annex 5).

34. A list of references relating to teacher education inspections handbooks and regulatory requirements is provided in Annex 6.

35. A study of teacher career pathways in California USA is currently advocating for a three tier system. "Money alone will not transform teaching. Higher compensation should be logically tied to new professional roles and greater responsibilities as teachers progress along a career pathway". Tier I teachers are new teachers on probation who would be provided with mentoring guidance and support from a more experienced teacher. Tier II teachers have permanent status and a full credential; Tier III "master teachers" could help train and evaluate new or struggling teachers, or redesign curricula to be more relevant for the district or school, while still remaining in the classroom for part of the day. Master or Tier III teachers could take over some of the managerial tasks now done by district personnel . Further reference information can be found at https://edpolicy.stanford.edu/news/articles/695. The report also recommends potentially extending the probationary period for teachers to up to four years instead of the two years currently required under state law. Under the approach envisioned in the report, first-year teachers would be seen as apprentices under the direction of a master teacher for part of the day. New teachers would spend the rest of the day working on developing lessons, analyzing student work, observing master teachers' classrooms, and deepening their knowledge of their subject. They would take charge of their classrooms

beginning in their second year. Although teachers could progress to Tier II by the end of their second year, it would typically take them three to four years.

36. References to examples of course structures and curriculum content for secondary teacher education are provided in Annex 7.

1.4   ANALYSIS AND RECOMMENDATION OF NEEDED ACTIONS FOR REFORM OF THE SECONDARY TEACHER EDUCATION AND CONTINUING PROFESSIONAL DEVELOPMENT

1.4.1   Secondary Teacher Education Survey: Findings and Recommendations

37. Summary findings and recommendations are provided in the following sections 1.4.2 to 1.4.7 with more detailed analysis and findings from the IOE and UDNR Secondary Teacher Education Survey data presented in Annex 2a.

1.4.2   IOE and UDNR Infrastructure

38. **Infrastructure Findings** In IOEs and UDNR, almost all classrooms except for the postgraduate ones are wide, well ventilated with sufficient light and they seemed to be built to mainly use lecture method for mass audience of students. Since there are long benches but no microphones in the classrooms for B.Ed. students, they do not favour to use methodologies associated learner-centred approach for group discussions. Through observation, it is found out that seminar rooms and postgraduate classrooms are well furnished with projectors and computers and wisely used for presentations of research findings and sharing experiences and information among students and teacher educators.

39. Each institute and university has a big library accessible to its all students at any level but according to the study, most of the books were those published in 2007 and before. Moreover, the libraries are not computer-aided and there is no access to the Internet, and the borrowing system there is very simple. Some teachers responded that they use e-books but by means of their own Internet accounts. Students said in the interview that they have to search for necessary information for their assignments and research in the private Internet Cafes, so they need extra time and money to spend on the use of the Net.

40. The study said that there are one or two computer rooms, which is merely used for teaching ICT to the B.Ed. and M.Ed. students. They have no opportunity to use for developing assignments and thesis papers that are demanded to be printed. The number of computers is not sufficient to let all the students use during ICT class. Instead, four or five students have to share one computer, which lead them to less interest on ICT.

41. YIOE, SIOE and UDNR have their own campuses in which big buildings with large classrooms lies in their respective systematic landscapes. Except for SIOE, others have old buildings of three or four decades ago.

42. **Recommendation - infrastructure** The structure of each classroom should be modified for teacher educators to apply advanced teaching methods such as cooperative learning, self-directed learning and problem solving, etc. It means that each of the classrooms should be formed only for the capacity of 25 students at maximum, and be furnished with advanced teaching learning materials for quality education.

43. **Recommendation – teaching and learning resources for teacher education** Teacher education institutions should have libraries that can provide both teacher educators and students not only with newly published books on a large scale but also with the wide use of e-books. In addition to computer rooms for ICT training, separate computer rooms should be available for the educational use of teachers and students in those institutions.

1.4.3 Recruitment and Deployment of Newly Qualified Secondary School Teachers – Findings and Recommendations

44. **Findings – Student Enrolment Criteria for IOEs and UDNR**. A review is needed to improve the standard criteria used for entrance for teacher training and the matriculation scores of students entering IOEs. The criteria used at present is based on ranking of the total matriculation examination scores. The criteria in UDNR is based on location, ethnicity poverty level and remoteness: students are selected from specified locations, they must be one of the specified ethnicity groups from that area, they must be from a poor family and from a remote location.

45. **Recommendation – entry criteria for IOE/UDNR** There should be more emphasis given to the attitude and aptitude of graduate applicants. If English is to continue to be the medium of instruction for mathematics and science in high schools English language competency should also be an entry criteria.

46. **Findings - Policy instructions for deployment of MS and HS subject specialists** High school education faces a serious teacher shortage problem according to the data source from the Department of Educational Planning and Training. It said that the number of high school teachers employed in the academic year 2011-12 is over 27,000. In the same academic year the number of junior teachers (JAT) employed in primary and middle schools, which is the key source of the recruitment of high school teachers, is nearly 69,000. Currently, the annual product of two IOEs and UDNR is around 2,800 graduates who are qualificed as middle school teachers. In the current system, after at least one year of teaching in middle school they can be promoted as high school teachers. In 2015 a new system will be introduced whereby around 3,000 graduates from the IOEs and UDNR will become high school teachers directly. This reform is intended to meet the shortage of high school teachers in the restructured education system.

1.4.4 Match between Subject Specialisation and Subject Teaching

47. Anecdotal evidence from the IOE survey and supporting evidence from the secondary school survey indicates that there is a mismatch between subject taught at middle and high school and subjects for which the teacher is qualified. Analysis of teacher responses in the secondary education survey (pilot) of 24 schools in three states and regions (Table 4) shows a mis-match between subject specialisation of teachers and the subject they are teaching for approximately 18% of teachers who majored in the three core subjects of Myanmar, English and mathematics.

48. For Myanmar subject majors 70% are teaching Myanmar or another subject for which they are trained and there is a fairly even distribution of Myanmar major teachers between middle school and high school.

49. For English subject majors 80% are teaching English or another subject for which they are trained and 60% are teaching in high school.

50. For mathematics subject majors, 90% are teaching mathematics or another subject for which they trained and 27 (60%) of the mathematics majors are teaching high school classes

Table 4   Teacher Specialisation and Subject Taught in Secondary Schools

27 out of 227 teachers in the sample majored in **Myanmar**, of whom:			
10 (37%) teaching Myanmar in middle school classes	7 (26%) teaching Myanmar in high school classes	2 (7%) teaching another subject in which they are also trained	8 (30%) teaching another subject in middle school for which they are not trained
15 out of 227 teachers in the sample majored in English, of whom:			
3 (20%) teaching English in middle school classes	7 (47%) teaching English in high school classes	2 (13%) teaching another subject in high school in which they are also trained	3 (20%) teaching another subject in middle school for which they are not trained
45 out of 227 teachers in the sample majored in Mathematics, of whom:			
11 (25%) teaching mathematics in middle school classes	14 (31%) teaching mathematics in high school classes	15 (33%) teaching another subject in which they are also trained (2 in middle school and 11 in high school	4 (9%) teaching another subject in middle school and 1 (2%) teaching another subject in high school for which they have not been trained
Of the 89 Myanmar, English and Mathematics Majors above:			
27% were teaching their major subject in middle school classes	34% were teaching their major subject in high school classes	21% were teaching another subject for which they are also trained	18% were teaching another subject in secondary school for which they have not been trained

51.   A summary of the subject specialisations compared to the subjects being taught (secondary education survey pilot data, Table 5) indicates that there is a balance in Myanmar, economics and geography and an apparent imbalance in all other subjects. This simplified analysis indicates that there are fewer teachers with subject specialisation teaching English, middle school science and co-curriculum subjects and there are more teachers with majors in mathematics, history, physics, chemistry and biology suggesting a possible undersupply in the former group of subjects and an over supply of teachers with majors in the latter group of subjects.

Table 5   Percentage of Teachers for Major compared to Subject Taught

Teachers' Majors			Teacher's Current Teaching Subjects		
Myanmar	27	9%	Myanmar	72	11%
Economics	18	6%	Economics	26	4%
Geography	25	8%	Geography	59	9%
English	15	5%	English	63	10%
Science	2	1%	Science	63	10%
Co-curriculum	2	1%	Co-curriculum	158	25%
Mathematics	45	15%	Mathematics	67	11%
History	38	12%	History	51	8%
Physics	36	12%	Physics	30	5%
Chemistry	37	12%	Chemistry	24	4%
Biology	43	14%	Biology	20	3%
Laws, ITBMU,others	18	6%			
Total	306	100%	Total	633	100%

52. Clarification of the guidelines and instructions on deployment of teachers is needed to ensure equitable allocation of subject specialist teachers to middle schools and high schools. The present system is based on the formula given above (para. 21) which is based on student enrolment and not subject-based. Deployment by the DBE is based on data collected from schools. There are instructions for teacher deployment for allocation to schools. However IOEs produce students according to the students choice of subject specialism with no match between this and the DBE projected requirement.

53. **Recommendation – projection of teacher supply and demand** An improved system is needed for more accurately calculating teacher supply and demand projections over a five+ year planning period. For secondary school teachers this must also take into account estimates of subject specialist requirements. A quality assurance procedure is also needed to ensure that middle schools and high schools guidelines and instructions for projecting teacher vacancies and deployment procedures are adhered to.

54. **Recommendation – improved system for equitable deployment of newly qualified teachers to schools.** A system is needed that ensures equitable deployment of teachers to secondary schools based on the needs of the schools for subject specialisms. The system should be designed to ensure that qualified teachers are encouraged to apply for teaching posts in all school types and locations through various kinds of incentives. A review should also be undertaken of the effectiveness of the current incentive arrangements designed to attract teachers to take up appointments in remote and rural areas. Examples of effectiveness of incentives used in other countries in the region including Lao and Cambodia may be studied.

55. **Recommendation –sufficient teacher supply and deployment** To cover the projected demand for high school teachers for the future reform in secondary education, only three teacher education institutions are not sufficient. For quality assurance and quality education, all teacher education institutions should be under one organization. The MOE needs to develop a more robust system for projecting required intake into IOE/UDNR by subject specialisation matched to the number of students who graduate annually from IOEs and UDNR and projection of school vacancies at each level and by subject requirement.

1.4.5 Secondary Teacher Education Curriculum – Findings and Recommendations

56. **Finding - Education methodology taught in IOEs and teaching methodology practiced in secondary schools. T**he IOE B.Ed pre-service teacher training courses emphasise the use of child centred approaches (CCA) and use of formative methods of classroom assessment. However there is clear evidence reported in theIOE/UDNR Teacher Education survey to indicate that graduate teachers quickly abandon this practice when they start teaching. This is reportedly due to pressure from peers, students and parents to teach in more traditional ways. The system of student assessment used in secondary schools based on Chapter End Tests (CET) and the system of school performance monitoring used by school supervisors and inspectors are said to both reinforce teacher centred learning and memorisation.

57. **Finding – IOE curriculum development** Professors indicated that the process of curriculum review and reform is controlled by BOS and expert subject teams. Some professors indicated that they would welcome greater participating and autonomy in setting the curriculum with the opportunity to submit responses to BOS when the curriculum is reviewed.

58. **Finding - Assessment methodology** Professors and lecturers in the IOEs expressed the view that in secondary education there is too much emphasis placed on knowledge and not enough attention given to students acquisition of skills and attitudes. More emphasis should be given to assessment of practical work, research projects and presentations. In the school curriculum there should be less use of tests, especially in primary grades, and an emphasis on new approaches for teachers to assess student learning and higher level thinking skills. At present

teachers in secondary schools do not have the skills or competency and do not have the autonomy to use different assessment approaches. Respondents in the Teacher Education survey stressed that schools and teachers should be given more flexibility and be able to encourage students to study what they are really interested in. To enable this the teachers need the support of the head teacher and the school inspectors.

59. **Finding – improvement to IOE assessment system** Some of the professors gave comments on ways to improve the assessment and quality of teacher education including the need to base assessment on 60% practical work and 40 % theory.

60. **Findings - English is the Language of Instruction** in IOEs and UDNR. Straight Forward, a UK publication, is the current text used in English classes. Students are weak on listening skills and not all teacher educators and professors have an adequate level of English language competency and student teachers also struggle to understand the course books that are written in English. Additional English courses have been provided for IOE lecturers. The main concern expressed by some lecturers and professors is that sudents cannot adequately demonstrate subject knowledge and understanding through English but assessment is conducted in English. One strategy that students use and that could be incorporated into new course materials in future is to provide Myanmar/English terminology in the text and in a glossary for each subject. Students should become literate in their mother tongue first. The decisions that are to be made regarding teaching of English as the medium of instruction for mathematics and science subjects in high schools will have an impact on the parallel decisions that will be needed for use of English in IOE and UDNR courses.

61. **Findings - Mother Tongue teaching**. UDNR had developed materials for teaching of 8 ethnic languages. Students need to study their own language, literature and culture as well as learning about other Myanmar cultures. If the policy is for regional language teaching then each regional government would need to be involved in the decision making process.

62. **Findings - ICT in IOEs and UDNR**. There is a lack of equipment and curriculum to teach ICT computer skills in IOEs at the present time. The UDNR had a computer room but in internet connectivity. A strategy and implementation plan for gradual upgrade and introduction of computer studies is needed. The timeframe for roll-out should be realistic in terms of human resource capacity and financial capacity. Other curriculum priorities should be implemented ahead of ICT as this is a potential drain on resources.

63. **Recommendation – Curriculum Policy** Curriculum policy for teacher education needs to be aligned to school teaching and learning practices with a clear strategy for best practice in teacher education curriculum theory and practice to be modelled in IOE/UDNR and reflected in school and classroom practice. Capacity development and institution based support is needed throughout the reform process to support professors, teacher educators, teachers and head teachers in overcoming barriers and challenges implementation of CCA and approaches to formative assessment. Community members, industry leaders, politicians and parents also need to support the implementation of best practice in teaching and learning, in particular to enable teachers to broaden teaching approaches from rote learning to student centred learning and critical thinking. The new models of assessment that will be introduced into schools should be consistent with the models of assessment taught and used in IOEs and UDNR courses.

64. **Recommendation - A common core curriculum** is needed that is consistent between ECs, IOEs and UDNR. The curriculum should be made more relevant to the real world and the lives of ths students, including guidelines on design and implementation of a local curriculum for teachers and students in rural areas. An increase in teaching and learning resouces in secondary schools and in IOE/UDNR is needed to ensure that all practical activities are taught well. The curriculum taught in IOEs and UDNR needs to align with the school curriculum.

65. **Recommendation - Teacher Competencies and Competency Based Learning** have been recommended in CESR Phase 1 for introduction in primary and secondary schools in the curriculum reform. Clear definitions of the meaning of competency-based learning in the Myanmar context will need to be described in the school and teacher education policy and the curriculum framework and then incorporated, through model examples, in the curriculum materials and teacher training programs. This change in pedagogical approach will also need to be reflected in the IOE and UDNR curriculum and modelled in the teaching approach used in those institutions. Teacher educators will need to develop their capacity in using competency-based approaches and may also be used as a resource for the program of school based in-service training needed to familiarise practicing teachers and head teachers in use of competency based teaching and learning. It will be important to ensure continuity and consistency between primary and secondary school and teacher education in defining teacher competencies and student competencies and in the approaches to be used for the introduction of competency based learning.

66. **Recommendation – Capacity development for secondary school head teachers, teachers and teacher educators** Capacity development seminars will be needed to introduce the new approaches to pedagogy and student assessment for teachers in secondary schools and for teacher educators and professors in IOEs and UDNR.

67. **Recommendation - A Capacity Development Plan** will need to be developed for implementation of the curriculum reforms to coordinate the process and to provide consistency and equity of coverage, to minimise on ad hoc programs and focus on the core aspects of the reform, to ensur nefficient utilisation of resources including mobilisation of available training teams. The plan may include training requirements of key officials at each level in the system and the range of topics – quality assurance, imtroduction of the new curriculum content, pedagogy and assessment methodology, school leadership and management training for school improvement, and training for township and district administrators.

1.4.6 Quality Assurance in Teacher Education – Findings and Recommendations

68. **Common Standards between Institutions** The Secondary Teacher Education survey found that 47% of professors in IOEs and UDNR indicate that there are no common standards between Institutes of Education and UDNR. Common standards should include a common curriculum and assessment, criteria for student access, terms and conditions of employment and deployment, etc. Some of the professors gave the example that the type of entrance criteria is different, QA system needs to be consistently applied, and students are allowed to apply for IOE if they gain high marks in the Matriculation examination. So some students with lower marks who would like to become a teacher cannot apply. Althought the IOEs apply the same standards for rural, urban and border areas, the UDNR standards apply to student teachers in the border areas only. IOEs and UDNR have the same academic and teacher education subjects but co-curriculum and special curriculum subjects are different in UDNR. One of the survey respondents proposed that there should be an agency which develops curriculum and syllabus for both IOEs and UDNR.

69. **Finding - Quality Assurance of Teacher Education Institutions:** There is no formalised procedure for quality assurance and performance monitoring of standards in IOEs and UDNR. For example there is no system for moderation of courses between departments in the IOEs and between teacher education institutions and there is no system for moderation of standards of student achievement between institutions. Rectors, professors and lecturers were all of the view that a common standard is needed, for implementation across all teacher education institutions. There is no regularised system of quality assurance in IOEs.

70. **Recommendation: A common agreed set of standards for all teacher education institutions** should be developed and implemented, including IOEs and UDNR, aligned with ECs. A quality assurance mechanism should be developed to monitor effectiveness and equity in implementation of the common standards.

71. **Recommendation - Quality Assurance of Teacher Education**. Standards for teacher education institutions need to be established, common to all institutions, with the implementation of a system for quality assurance and performance monitoring. Quality assurance of teacher education institutions would include performance monitoring of student teacher achievement and teacher educator effectiveness. It would also provide a basis for development of institutional improvement plans and CPD plans. A QA system should be introduced into teacher education institutions that involves an internal QA team and an external QA team should be established.

72. **Recommendation – Quality Assurance of Teacher Educator and Professor Performance** Quality assurance of teacher education should include performance and promotion criteria for lecturers and professors including: research paper and professional book publication, conference presentations and number of PhD and Masters degree students supervised.

1.4.7   Professional Development of Teacher Educators – Findings and Recommendations

73. **Findings - Professional development of teacher educators** in IOEs and UDNR has been insufficient and variable in recent years and has been insufficient to provide all staff with regular upgrade training.

74. **Findings - Professional development for teacher educators (Lect.Qu.15)** Table 6 shows the types or methods of CPD experienced by teacher educators last year in YIOE, SIOE and UDNR. According to findings, teacher educators in YIOE have experienced in self- directed studies, study groups/ group activities and other CPD types 2-3 times in a year. Teacher educators in YIOE have also experienced in Workshop series / long courses and action research as well as networks (on line courses) once a year. This table indicates that teacher educators in YIOE experienced some types or methods of CPD for their professional development in their organization last year.

75. It also indicates that teacher educators in SIOE have experienced self- directed study, study groups/ group activities in the same way as YIOE teacher educators and have participated in collaborative learning 2-3 times in a year. Besides conference/ lecturers and networks (online courses) have been experienced once a year in SIOE. Teacher educators in SIOE have experienced in single workshop/ short courses and workshop series/ long courses, action research and other CPD types less than once a year according to this findings. It can be assumed that the types or methods of CPD should be considered and provided for teacher educators to improve their skills, knowledge and practice with more opportunities provided for continuous professional development

76. According to these findings, teacher educators in UDNR have never experienced in conferences/ lecturers, college coursework, action research and other CPD last year. The table shows that teacher educators in UDNR have experienced in single workshop/short courses, workshop series/ long courses, networks (online courses) and teleconferences less than once a year. Teacher educators have experienced in self- directed study, mentoring/ critical friendship, study group and collaborative learning once a year. It can be assumed that there will be a need to provide more opportunity for CPD and types and methods of CPD should be considered to improve the capacity of teacher educators for their continuous professional development.

Table 6   Types of CPD experienced by teacher educators last year in IOEs and UDNR

Types or methods of CPD experienced (Lect.Qu.15)	YIOE			SIOE			UDNR		
	Mean	SD	How often?	Mean	SD	How often?	Mean	SD	How often?
Self – directed study	4.07	1.4	2-3 times a year	4.20	1.2	2-3 times a year	2.52	1.9	Once a year
Mentoring / Critical friendships	3.52	1.6	2-3 times a year	4.02	1.5	2-3 times a year	2.60	2.0	Once a year
Study groups/ Group activities	3.86	1.4	2-3 times a year	4.10	1.4	2-3 times a year	3.00	2.1	Once a year
Collaborative learning	3.67	1.5	2-3 times in a year	4.08	1.5	2-3 times a year	3.11	2.1	Once a year
Peer coaching / Observation	3.74	1.2	2-3 times a year	3.90	1.3	2-3 times a year	1.29	1.1	Never
Conferences / Lecturers	3.61	0.7	2-3 times a year	3.22	1.4	Once a year	1.20	0.9	Never
Others	3.61	1.0	2-3 times in a year	1.83	1.0	< once a year	1.00	0.0	Never
Networks	2.78	1.9	Once a year	3.25	1.6	Once a year	2.33	2.0	< once a year
Single workshops/ Short courses	3.49	1.3	Once a year	2.62	1.3	< once a year	2.44	.896	< once a year
Workshop series/ Long courses	2.53	1.2	Once a year	2.10	1.2	< once a year	1.95	1.1	< once a year
Teleconference / Video	3.49	1.6	Once a year	2.24	1.4	< once a year	1.57	1.5	< once a year
College coursework	2.58	1.3	Once a year	2.47	1.5	< once a year	1.24	1.0	Never
Action research	2.53	1.6	Once a year	2.49	1.1	< once a year	1.29	0.8	Never

Range definitions: 1.00-1.49 = Never, 1.50-2.49 = less than once a year, 2.50-3.49 = once a year, 3.50-4.49 = 2-3 times in a year, 4.50-5.00 = at least once a month

77. **Findings – Institute-based support for CPD** (Lect.Qu.14) Analysis of secondary teacher education survey responses from lecturers in both IOEs (Table 7) indicates that there is some support provided from staff within the institutes but very little external support for professional development. The table below shows the percentage of lecturers who received the various kinds of CPD support. This indicates that approximately three quarters of the lecturers never received support from private agencies, NGOs and international agencies. The most likely source of CPD support to lecturers is from professors and other teachers or faculty members.

Table 7   Institute-based support for CPD

Institute-based support (Combined three institutes)				
How often have teacher educators received support to improve their professional performance? (Lect.Qu.14)	N	Mean	SD	Frequency of institute-based support
Professor	135	**3.60**	1.5	Sometimes
Rector / Pro-rector	146	3.31	1.2	Sometimes
Other teachers or members	143	3.22	1.1	Sometimes
My institute	127	3.16	1.1	Sometimes
External experts	146	2.25	1.0	Rarely
Other colleges / University	121	2.21	1.0	Rarely
Other institutes	118	2.15	0.9	Rarely
International agencies	144	1.48	0.9	Never
Private agencies	133	1.36	0.6	Never
NGOs	139	**1.30**	0.6	Never

Range Definitions: 1.00-1.49 = Never, 1.50-2.49 = Rarely, 2.50-3.49 = Sometimes, 3.50-4.49 = Sometimes, 4.50-5.00 =Often

78. According to the educators from UDNR, (Table 8) most of the teachers had some forms of CPD, especially group activities and collaborative learning only one time last year. On the other hand, the group activities and collaborative learning are considered as highly effective forms of CPD that can help enhance their professional knowledge, skills and practice. Other forms of CPD expected by teacher educators can give somewhat effectiveness for their continuous professional development in organization such as single or series workshops, conferences, self-directed study, peer coaching and action research.

79. According to the educators from SIOE (Table 8), most of the teachers had some forms of CPD, especially self-directed study, peer coaching/observation, mentoring/ critical friendships, group activities and collaborative learning 2-3 times once last year. On the other hand, action research, collaborative learning, self-directed study and peer coaching/observation are considered as highly effective forms of CPD that can help enhance their professional knowledge, skills and practice. Other forms of CPD expected by teacher educators can give somewhat effectiveness for their continuous professional development in organization.

80. According to the educators from YIOE (Table 8), there were no types or methods of CPD which teacher educators did not experience last year. Table 8 shows that most of teacher educators had experienced some types of forms of CPD 2-3 times last year while some teacher educators had experienced some CPDs only one time last year. On the other hand, teacher educators had experienced some CPDs less than once last year. Table 6 indicates that almost all the teacher educators expect that the forms of CPD such as action research, mentoring/critical friendship, self-directed study, teleconference and etc. can enhance their professional knowledge, skills and practice.

Table 8   The rate of effectiveness of CPD expected by teacher educators in enhancing their professional knowledge, skills and practices

Forms of CPD expected by teacher educators (Lect.Qu.18)	YIOE			SIOE			UDNR		
	Mean	SD	Rate of effective	Mean	SD	Rate of effective	Mean	SD	Rate of effective
Study groups/ Group activities	4.27	0.6	Somewhat effective	4.40	1.5	Somewhat effective	4.87	0.4	Highly effective
Collaborative learning	4.20	0.5	Somewhat effective	4.67	0.5	Somewhat effective	4.87	0.4	Highly effective
Self – directed study	4.39	0.9	Somewhat effective	4.55	0.7	Somewhat effective	3.84	0.4	Somewhat effective
Peer coaching / Observation	4.23	0.6	Somewhat effective	4.51	0.5	Somewhat effective	3.84	0.4	Somewhat effective
Conferences / Lecturers	4.16	0.7	Somewhat effective	4.35	1.0	Somewhat effective	4.00	0.7	Somewhat effective
Action research	4.02	1.1	Somewhat effective	4.67	0.5	Somewhat effective	4.00	0.0	Somewhat effective
Single workshops/ Short courses	4.04	0.8	Somewhat effective	3.82	1.0	Somewhat effective	4.00	0.7	Somewhat effective
Networks	3.67	1.4	Somewhat effective	4.51	0.5	Somewhat effective	4.14	1.5	Somewhat effective
Workshop series/ Long courses	3.91	1.2	Somewhat effective	4.10	0.9	Somewhat effective	4.20	0.8	Somewhat effective
College coursework	3.93	1.3	Somewhat effective	4.10	0.7	Somewhat effective	4.00	0.5	Somewhat effective
Mentoring / Critical friendships	4.31	0.6	Somewhat effective	3.82	1.0	Somewhat effective	3.81	0.5	Somewhat effective
Teleconference / Video	3.40	1.4	Somewhat effective	4.29	1.0	Somewhat effective	4.00	0.0	Somewhat effective
Others	4.00	0.0	Somewhat effective	4.51	0.5	Somewhat effective	4.00	0.7	Somewhat effective

Range Definitions: 1.00-1.49 = Never participated this type of activity, 1.50-2.49 = Ineffective, 2.50-3.49 = Somewhat ineffective, 3.50-4.49 = Somewhat effective, 4.50-5.00 =Highly effective

81. **Finding – CPD opportunity for Professors (Prof.Qu.27)**. There were few opportunities for professors to attend conferences aborad in the past year (Table 9). Only 6 of the 47 professors in the survey had been to conferences in the ASEAN region in the past year and 4 professors had been invited to attend conferences outside ASEAN. More than two thirds of the professors had attended professional seminars and conferences in Myanmar during the last academic year. 16 of the 47 professors surveyed indicated that they were currently engaged

in some professional development training and one indicated that they are studying an online course.

Table 9   **Support provided to Teacher Educators for CPD**

How often have teacher educators received support to improve their professional performance? (Prof.Qu.27)	Percentage of institute-base support (combined three institutes)					
	N	Always	Often	Sometimes	Rarely	Never
1. Rector/ Pro-rectors	146	24.0	12.3	42.5	13.0	8.2
2. Professor	135	41.5	19.3	16.3	3.7	19.3
3. Other teachers or members	143	11.2	31.5	40.6	2.1	14.7
4. External experts	121	2.5	6.6	34.7	22.3	33.9
5. My institute	127	18.1	10.2	49.6	13.4	8.7
6. Other institutes	118	0.0	5.9	31.4	34.7	28.0
7. Private agencies	133	0.0	0.0	8.3	19.5	72.2
8. NGOs	139	0.0	0.7	5.0	18.0	76.3
9. International agencies	144	1.4	0.7	13.2	13.9	70.8
10. Other college/ University	146	0.7	6.2	47.9	8.2	37.0

82.   **Recommendation – CPD in Teacher Education** An HRD master plan is needed to map and prioritise the professional upgrade for all IOE and UDNR teacher educators and professors. The HRD Master Plan should ideally include teacher educators and professors from ECs though that will require cooperation between the respective line ministries.

1.4.8   **Teacher Education for improved quality of secondary education – Findings and Recommendations**

83.   **Recommendation – Possible Interventions** Table 10, below, outlines a key indicator for quality improvement in secondary education, identification of some of the root causes and some possible interventions arising from discussion with various stakeholders in teacher education during CESR Phase 2.

Table 10   Targets, Indicators, Root Causes and possible Interventions for Improved Quality of Secondary Education

Target	Indicator	Root Cause	Possible Interventions
Improved QUALITY of Secondary Education	Increase in student learning achievement measured through improved teacher education and CPD	• Under-qualified teachers in some schools • Small schools / affiliated / branch schools under resourced	• Equitable deployment of qualified teachers to match needs of the school • Incentives for teachers in the more challenging schools • Local conditions for teachers improved • CPD / capacity development and mentoring for teachers • Improved teacher manuals and classroom resources/posters

ANNEX 1a   SUMMARY OF RECOMMENDATIONS

1. **Recommendation – infrastructure.** The structure of each classroom should be modified for teacher educators to apply advanced teaching methods such as cooperative learning, self-directed learning and problem solving, etc. It means that each of the classrooms should be formed only for the capacity of 25 students at maximum, and be furnished with advanced teaching learning materials for quality education.

2. **Recommendation – teaching and learning resources for teacher education.** Teacher education institutions should have libraries that can provide both teacher educators and students not only with newly published books on a large scale but also with the wide use of e-books. In addition to computer rooms for ICT training, separate computer rooms should be available for the educational use of teachers and students in those institutions.

3. **Recommendation – entry criteria for IOE/UDNR.** There should be more emphasis given to the attitude and aptitude of graduate applicants. If English is to continue to be the medium of instruction for mathematics and science in high schools English language competency should also be an entry criteria.

4. **Recommendation – projection of teacher supply and demand** An improved system is needed for more accurately calculating teacher supply and demand projections over a five+ year planning period. For secondary school teachers this must also take into account estimates of subject specialist requirements. A quality assurance procedure is also needed to ensure that middle schools and high schools guidelines and instructions for projecting teacher vacancies and deployment procedures are adhered to.

5. **Recommendation – improved system for equitable deployment of newly qualified teachers to schools.** A system is needed that ensures equitable deployment of teachers to secondary schools based on the needs of the schools for subject specialisms. The system should be designed to ensure that qualified teachers are encouraged to apply for teaching posts in all school types and locations through various kinds of incentives. A review should also be undertaken of the effectiveness of the current incentive arrangements designed to attract teachers to take up appointments in remote and rural areas. Examples of effectiveness of incentives used in other countries in the region including Lao and Cambodia may be studied.

6. **Recommendation –sufficient teacher supply and deployment** To cover the projected demand for high school teachers for the future reform in secondary education, only three teacher education institutions are not sufficient. For quality assurance and quality education, all teacher education institutions should be under one organization. The MOE needs to develop a more robust system for projecting required intake into IOE/UDNR by subject specialisation matched to the number of students who graduate annually from IOEs and UDNR and projection of school vacancies at each level and by subject requirement.

7. **Recommendation – Curriculum Policy.** Curriculum policy for teacher education needs to be aligned to school teaching and learning practices with a clear strategy for best practice in teacher education curriculum theory and practice to be modelled in IOE/UDNR and reflected in school and classroom practice. Capacity development and institution based support is needed throughout the reform process to support professors, teacher educators, teachers and head teachers in overcoming barriers and challenges implementation of CCA and approaches to formative assessment. Community members, industry leaders, politicians and parents also need to support the implementation of best practice in teaching and learning, in particular to enable teachers to broaden teaching approaches from rote learning to student centred learning and critical thinking. The new models of assessment that will be introduced into schools should be consistent with the models of assessment taught and used in IOEs and UDNR courses.

8. **Recommendation - A common core curriculum** is needed that is consistent between ECs, IOEs and UDNR. The curriculum should be made more relevant to the real world and the lives of ths students, including guidelines on design and implementation of a local curriculum for teachers and students in rural areas. An increase in teaching and learning resouces in secondary schools and in IOE/UDNR is needed to ensure that all practical activities are taught well. The curriculum taught in IOEs and UDNR needs to align with the school curriculum.

9. **Recommendation - Teacher Competencies and Competency Based Learning** have been recommended in CESR Phase 1 for introduction in primary and secondary schools in the curriculum reform. Clear definitions of the meaning of competency-based learning in the Myanmar context will need to be described in the school and teacher education policy and the curriculum framework and then incorporated, through model examples, in the curriculum materials and teacher training programs. This change in pedagogical approach will also need to be reflected in the IOE and UDNR curriculum and modelled in the teaching approach used in those institutions. Teacher educators will need to develop their capacity in using competency-based approaches and may also be used as a resource for the program of school based in-service training needed to familiarise practicing teachers and head teachers in use of competency based teaching and learning. It will be important to ensure continuity and consistency between primary and secondary school and teacher education in defining teacher competencies and student competencies and in the approaches to be used for the introduction of competency based learning.

10. **Recommendation – Capacity development for secondary school head teachers, teachers and teacher educators** Capacity development seminars will be needed to introduce the new approaches to pedagogy and student assessment for teachers in secondary schools and for teacher educators and professors in IOEs and UDNR.

11. **Recommendation - A Capacity Development Plan** will need to be developed for implementation of the curriculum reforms to coordinate the process and to provide consistency and equity of coverage, to minimise on ad hoc programs and focus on the core aspects of the reform, to ensure efficient utilisation of resources including mobilisation of available training teams. The plan may include training requirements of key officials at each level in the system and the range of topics – quality assurance, introduction of the new curriculum content, pedagogy and assessment methodology, school leadership and management training for school improvement, and training for township and district administrators.

12. **Recommendation: A common agreed set of standards for all teacher education institutions** should be developed and implemented, including IOEs and UDNR, aligned with ECs. A quality assurance mechanism should be developed to monitor effectiveness and equity in implementation of the common standards.

13. **Recommendation - Quality Assurance of Teacher Education**. Standards for teacher education institutions need to be established, common to all institutions, with the implementation of a system for quality assurance and performance monitoring. Quality assurance of teacher education institutions would include performance monitoring of student teacher achievement and teacher educator effectiveness. It would also provide a basis for development of institutional improvement plans and CPD plans. . A QA system should be introduced into teacher education institutions that involves an internal QA team and an external QA team should be established.

14. **Recommendation – Quality Assurance of Teacher Educator and Professor Performance** Quality assurance of teacher education should include performance and promotion criteria for lecturers and professors including: research paper and professional book publication, conference presentations and number of PhD and Masters degree students supervised.

15. **Recommendation – CPD in Teacher Education**. An HRD master plan is needed to map and prioritise the professional upgrade for all IOE and UDNR teacher educators and professors. The HRD Master Plan should ideally include teacher educators and professors from ECs though that will require cooperation between the respective line ministries.

16. **Recommendation – Possible Interventions for Quality Improvement of Teachers in Secondary Education**

    a. Equitable deployment of qualified teachers to match needs of the school

    b. Incentives for teachers in the more challenging schools

    c. Local conditions for teachers improved

    d. CPD / capacity development and mentoring for teachers

    e. Improved teacher manuals and classroom resources/posters

ACTIONS	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Infrastructure Improvement						
Infrastructure Plans / Campus Plans developed based on projection of construction requirement to meet future expansion of IOE capacity	X					
Improved teaching and learning resources for staff and students including classroom environment, libraries and ICT for research / self study	X	X	X	X	X	X
IOE and UDNR strengthening						
Review the IOE / UDNR entrance requirements (aptitude, competencies, language proficiency) for staff and students		X				
An HRD Master Plan developed to map out professional development and career pathways for teacher educators		X				
Improved Teacher Deployment						
Improved TEMIS for more efficient supply and demand of secondary school teachers by subject and location	X	X	X			
Quality Improvement for Graduate Teachers						
QA system strengthened to ensure equitable deployment of secondary teachers to schools by subject specialism		X	X			
Review and improve teacher incentives, CPD and mentoring of new graduate teachers and improved classroom environment and resouces		X	X	X		
Secondary Teacher Education Curriculum						
Curriculum Policy for teacher education aligned to secondary school curriculum (content, pedagogy assessment and language of instruction)	X					
Common Curriculum Standards: Align teacher training programs and curriculum between IOEs and ECs into a common core curriculum	X					
B.Ed / M.Ed curriculum revised to competency based curriculum and new secondary school curriculum subjects / modules, pedagogy and assessment	X	X	X	X	X	
Teacher Educator Professional Development						
Capacity Development Plan developed for professional development of teacher educators and professors to meet competency standards	X					
Capacity development program and on-going CPD for teacher educators to introduce the new curriculum content, pedaogogy and assessment		X	X	X	X	X
T.Ed QA system strengthened to include monitoring of CPD and competency standards for professors and teacher educators		X	X			

ANNEX 2   SECONDARY TEACHER EDUCATION SURVEY (IOE AND UDNR)

BACKGROUND

In CESR Phase 1 rapid assessment of the secondary education sector (SES) a range of issues relating to teacher education were identified for further in-depth analysis in Phase 2. In particular due to lack of information to date an in-depth study of pre-service and in-service teacher education and CPD will contribute to recommendations for system strengthening.

A 1 day field visit (per institution) was arranged by the CESR Teacher Education and Secondary Education teams to meet key staff from Yangon and Sagaing IOEs and Mandalay UDNR. This provided the opportunity for information gathering on key education reform issues relating to pre-service, in-service and CPD for secondary school teachers. Further information was gathered on:

(i)   Secondary school teacher qualification and deployment by school type, by subject, by school size, gender and urban/rural differences is needed to address disparities in teacher supply across regions

(ii)   Teacher policy / teacher standards for secondary teachers

(iii) Initial consideration of Strategy and Implementation Plan needed to support curriculum reform (content, pedagogy and student assessment): upgrade of Teacher Educator skills, in-service and CPD for secondary school teachers and head teachers, upgrade of MS and HS teacher initial qualifications, and strengthening of secondary school improvement through support from TEOs and school supervision, monitoring and evaluation

(iv)   Future requirement for Middle Schools as enrolment increases and curriculum is upgraded which could lead to a stronger subject specialist focus affecting teacher supply

METHODOLOGY AND APPROACH

The 1 day field visits to each of the 2 IOEs and UDNR were arranged by CESR team:

a.   to present the Phase 1 recommendations and outcomes;

b.   to consult with IOE and UDNR on areas to be strengthened aligned to the curriculum reform process and the planned restructuring of the education system;

c.   to complement the EC UNICEF study.

The consultation meetings included discussion with IOE and UDNR rectors and senior staff on teacher education policy, teacher competencies and organisational structure (JICA focus). The CESR secondary teacher education team gathered information on:

a.   IOE/UDNR statistics

b.   an outline of the issues that the IOE / UDNR identifies as needing to be considered in the curriculum reform process to improve teacher education for high school teachers

c.   an institutional analysis of areas that need to be strengthened in Teacher Education to support the curriculum reforms

d.   suggestions for capacity building of IOE / UDNR faculty.

The small team of CESR Teacher Education staff, along with the JICA and ADB consultants observed classes, administered the questionnaires to professors, teacher educators and student teachers. Interviews and participatory discussion groups were conducted with faculty staff and students.

The 3 days of visits to IOEs and UDNR were held in the last week of August.

Range of Topics included in the Teacher Education Survey

Below are the topics and questions that the CESR Secondary Teacher Education team considered in preparing the survey instruments and again in undertaking the analysis of survey data:

Teacher education policy

- what policy and instructions are given for pre-service, in-service and continuing professional development of secondary school teachers, head teachers and Teacher Educators in Myanmar?

Teacher education access

- what are the entry requirements for people to become middle school or high school teachers? What reforms are needed?

Teacher education methodology

- what are the main approaches to teaching used by the lecturers in the IOE/UDNR when teaching secondary school student teachers (trainees)?

Teacher education curriculum quality and relevance

- Is the IOE/UDNR curriculum relevant to middle and high school teachers for all subjects?

- What are the main areas of weakness in the curriculum for training of middle and high school teachers?

- Is the quality of the curriculum satisfactory for all subjects (teaching resources, updated content, sufficient content, too little or too much content, matched to the school curriculum?

Teacher education to support new approaches to teaching and learning (student centred, higher level thinking skills / critical thinking, problem solving, etc)

- Are these approaches included in the BEd curriculum for middle school and high school teachers?

- How can these reforms be introduced in the BEd curriculum to ensure that they are practiced in schools?

Teacher education assessment

- What are the main approaches used by the IOE/UDNR to assess the learning of middle school and high school student teachers (trainees)? (school practicum, written tests/exams, course work assignments?

- What improvements / reforms need to be made to the assessment of trainee middle and high school teachers?

Teacher education standards

- Are there common standards which apply to the IOEs and UDNR?

- How are the common standards monitored and quality assured?

Teacher education practical application

- What areas of the curriculum are more difficult for teachers to apply in practice?

- How can this be improved?

Teacher education institute-based / on-going support

- What CPD professional support is currently provided to teacher educators in their institute? (Rector, Pro-Rector, Professor, other staff members, external experts, etc)

- How could this school based support be improved?

Teacher education as the basis for curriculum reform

- How effective is teacher education as a means of introducing reform to teaching pedagogy and assessment in secondary schools?

Teacher education to strengthen school leadership skills (training for head teachers)

- What training is currently provided for head teachers to support implementation of the curriculum (frequency and content)?

- How could this be improved?

Strengthening of the capacity of Teacher Educators

- What training is currently provided for Teacher Educators to ensure that their skills and knowledge are matched with the school curriculum?

- What is the process for reform of the Teacher Education programs?

ANNEX 2a   SECONDARY TEACHER EDUCATION SURVEY FINDINGS

Summary information on Sample Size

1. Table 11 shows the final sample size for the Secondary Teacher Education with a total of 310 questionnaire respondents distributed fairly evening across the three Institutes offering secondary school teacher training at B.Ed and M.Ed level. The IOEs also offer PhD. At the time of the survey there were no student teachers on campus as the academic year differs from the IOE academic year and there has been a temporary suspension of the B.Ed course.

Table 11   Sample breakdown position (professor, teacher educator and student teacher) by institute and gender

	Professors/ AP/HOD			Teacher Educators			Student Teachers		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
YIOE	15	2	**17**	38	9	**47**	59	59	**118**
SIOE	9	3	**12**	41	9	**50**	70	52	**122**
UDNR	18	0	**18**	44	11	**55**	n/a	n/a	-
TOTAL	**42**	**5**	**47**	**123**	**29**	**152**	**129**	**111**	**240**

Student Teacher breakdown

First Year students	Second Year students	Third Year students	Fourth Year students
54 (22.6%)	49 (20.5%)	64 (26.8%)	72 (30.1%)

Note: one missing case

Institute Improvement Plans

2. 93% of IOE and UDNR professors indicated that they have an Institute Improvement Plan including professional development plans, curriculum development plans, student quality development plans, facilities development plans and building development plans. Further information is needed to identify how the plans are developed, implemented and monitored in each institution.

3. **Recommendation**: Undertake a review of Institute Improvement Plans in IOEs and UDNR and identify ways to improve their effectiveness.

Student Teacher Subject Specialisms and Matriculation Scores

4. BEd-trained teachers qualify to teach three subjects. The two most popular combinations are (i) Science, Arts and Social Studies, or (ii) Physics, Chemistry and Economics. All trainee teachers have to study Mathematics and English, Civic Education and Myanmar as compulsory subjects, as well as pedagogy, education theory and psychology. The matriculation examination scores are one of the IOE and UDNR entrance requirements. The matriculation scores of the student teacher sample in the secondary teacher education survey are shown in Table 12 below.

Table 12   Matriculation Scores of Student Teacher sample (YIOE, SIOE and UDNR) – ST.Qu 6.

	English	Myanmar	Mathematics	Chemistry	Biology	Physics	Economics	History	Geography	Total Score
Range	40 to 81	48 to 79	40 to 97	40 to 96	43 to 94	40 to 96	58 to 94	54 to 96	56 to 95	294 to 496
Average	61.19	66.21	69.22	73.08	74.09	75.29	80.44	80.65	81.44	424.49
Count	233	234	234	180	115	180	121	54	54	

Matriculation Examination Scores for Student Teachers (ST.qu.6)
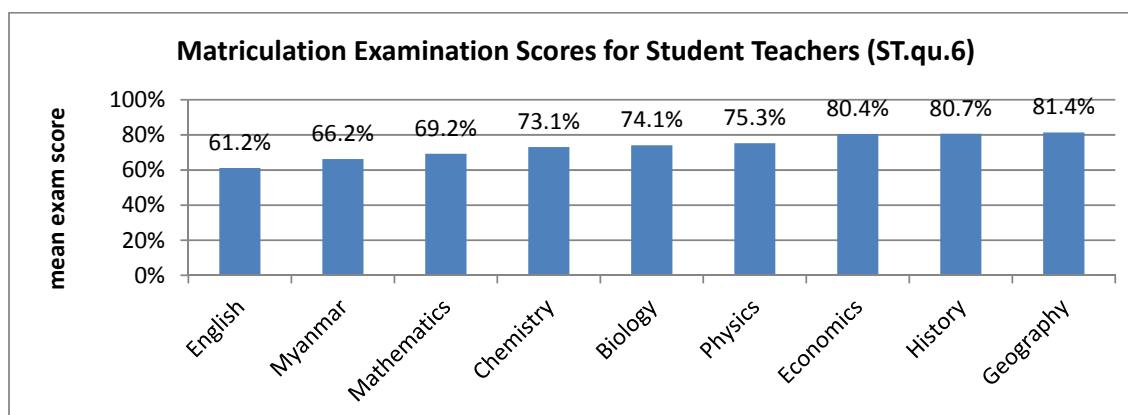
Student Teacher Perceptions of the Teacher Education Program

Student Teacher perceptions of challenging subjects to teach (ST.Qu.16.2)

5.   Responses to open question no.16.2 in the student teacher survey indicate the subjects that student teachers perceive as more challenging to teach. Chemistry. mathematics, physics and biology are perceived as the most difficult to apply in practice. It may be assumed that one reason for this is that these are the subjects taught in English at high school though there may be other reasons such as the nature of the subject and the lack of opportunity to relate learning to practice in these subjects.

Student teacher perception of difficult areas of curriculum to apply in practice (qu 16.2)
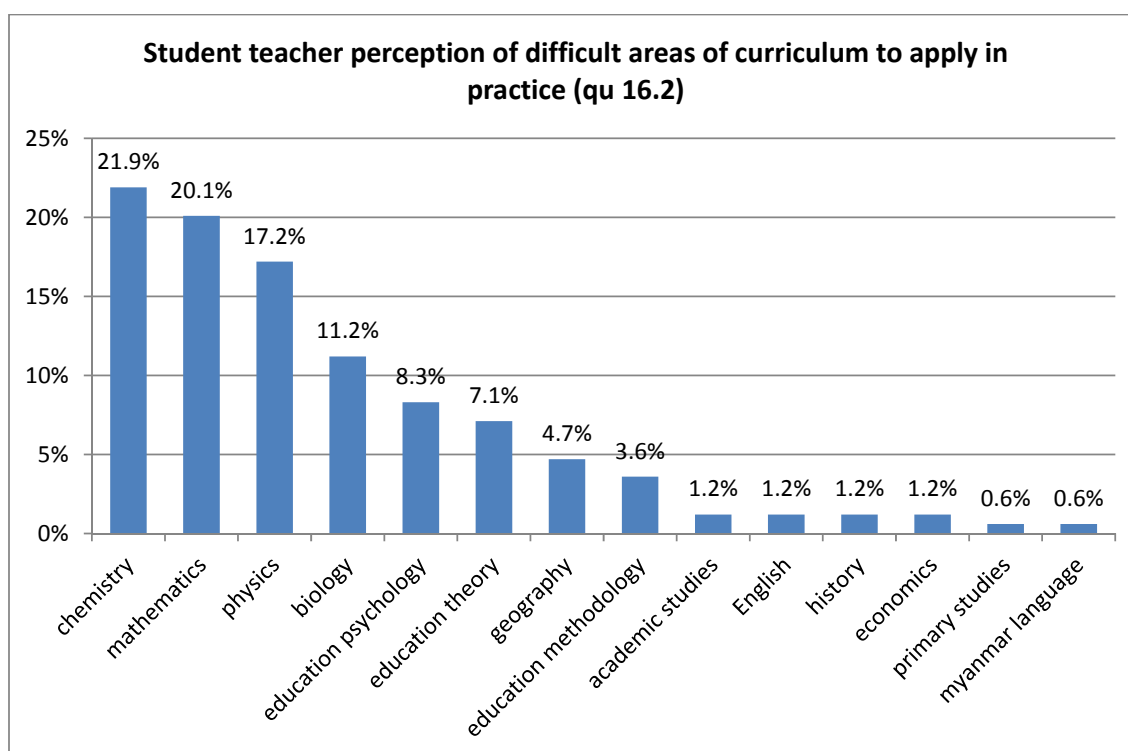
Perceptions of the program for Student Teacher preparation

6.   Student teacher were asked for their perceptions of the effectiveness of their courses for preparing them to teach (ST.Qu.9). Table 13 below shows the mean and standard deviation of scores on a Lickert scale 1-4 (1=strongly disagree to 4=strongly agree) indicating a strong consensus on perspective among the student teachers and overall agreement with the effectiveness of preparation for teaching. This should certainly reflect and be communicated

through to their teaching practice in school. Question 9.8 provides a counter question (consensus strongly disagree rather than the pattern of strongly agree in all other responses) indicating that students read and responded reflectively to the question content and did not provide an automatic response since it would be hoped that student teachers should agree that children should be given the opportunity to ask questions.

Table 13 **Perceptions of Student Teacher Preparation (ST.Qu.9)**

ST.Qu.9 Perceptions of Student Teacher Preparation	Mean	SD	Level of Agreement
1. Effective/good teachers demonstrate the correct way to solve a problem.	3.67	.488	Strongly Agree
2. Thinking and reasoning processes are more important than specific curriculum contents.	3.56	.624	Strongly Agree
3. This course was comprehensive enough to acquire understandings and abilities needed.	3.01	.678	Somewhat Agree
4. Contents in my course are supported by theoretical and practical studies.	3.11	.739	Somewhat Agree
5. This course adequately represented the realities and challenges of schools.	2.77	.811	Somewhat Agree
6. My role as a teacher is to facilitate children's own inquiry learning.	3.58	.630	Strongly Agree
7. Teachers know a lot more than children;	3.47	.759	Strongly Agree
8. Teachers shouldn't let children have chances to ask questions.	1.42	.923	Strongly Disagree
9. Instruction should be built around problems with clear, relevant answers, and around ideas that most children can grasp quickly.	3.22	.693	Somewhat Agree
10. How much children learn depends on how much background knowledge they have.	3.35	.673	Strongly Agree
11. Children should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved.	3.54	.677	Strongly Agree

Range definitions: 1.00-1.74 = Strongly Disagree, 1.75-2.49 = Somewhat Disagree, 2.50-3.24 = Somewhat Agree, 3.25-4.00 = Strongly Agree

7. Most student teachers strongly agreed that good teachers demonstrate the correct way to solve a problem, the role of the teacher is to facilitate enquiry learning in children and teachers know a lot more than children but they strongly disagreed that teachers should not allow children to ask questions. Student teachers indicated that children should be allowed to think of solutions to practical problems themselves before the teacher shows them how they are solved, that how much children learn depends on how much background knowledge they have, and that thinking and reasoning processes are more important than content. The conclusion is that student teachers demonstrated a strong awareness of the importance of student-centred learning.

Topics in which Student Teachers were interested to learn more to improve their professional knowledge (ST.Qu.10)

8. Student teachers at both Institutes of Education showed a strong interest in wanting to improve their knowledge across a wide range of professional topics. Slightly less interest was shown towards developing a curriculum for children of different abilities and interests, student counselling, use of ICT for teaching and instructional planning. The finding that

student teachers in both institutions tended to be relatively least interested in aligning the curriculum to individual learning needs is particularly interesting in the present context of teaching and learning in Myanmar in which all children learn the same content and complete the same assignments and assessment tasks. There is very little differentiated learning provided to meet the needs of individual children and very little focus on inclusive education to provide for children with different abilities and interests. The proposed new approach to teaching and learning that is intended to focus on competency based learning will have as its core focus the learning needs and acheivements of individual children.

Table 14 **Professional Knowledge of Student Teachers**

Which topics are you interested to learn more to improve your professional knowledge? (ST.Qu.10)	Yangon IOE		Sagaing IOE	
	Mean	Interpretation	Mean	Interpretation
How to align school curriculum with individual children needs	**3.15**	Moderately Interested	**2.93**	Moderately Interested
Student counselling	3.25	Very Interested	3.15	Moderately Interested
How to use ICT skills for teaching	3.27	Very Interested	3.19	Moderately Interested
How to plan instruction using knowledge of learning, subject matter, curriculum, and child development	3.51	Very Interested	3.19	Moderately Interested
How to teach children with learning needs and/or difficulties	3.41	Very Interested	3.40	Very Interested
How to improve the academic performance of difficult or unmotivated children	3.25	Very Interested	3.42	Very Interested
How to develop curriculum that builds on children experiences, interests, and abilities	3.57	Very Interested	3.52	Very Interested
How to choose different teaching strategies to meet the needs of different levels of children	3.44	Very Interested	3.46	Very Interested
How to teach basic knowledge and skills	3.50	Very Interested	3.59	Very Interested
How to encourage children to ask questions and interpret ideas from diverse perspectives	3.51	Very Interested	3.36	Very Interested
How to make clear links between theoretical and practical aspects of teaching	3.53	Very Interested	3.32	Very Interested
How to maintain discipline of children and how to deal with behavior problems	3.33	Very Interested	3.41	Very Interested
School management and administration	3.36	Very Interested	3.27	Very Interested
How to relate classroom learning to the real world	3.75	Very Interested	3.64	Very Interested
How to help children become self-motivated and self-directed	**3.74**	Very Interested	**3.74**	Very Interested

Range definitions: 1.00-1.74 = Not Interested, 1.75-2.49 = A little interested, 2.50-3.24 = Moderately interested, 3.25-4.00 = Very Interested

Student teachers understanding of teaching approaches (ST.Qu.11)

9.   The perception of YIOE and SIOE students is very similar in the extent to which they rate their teacher education preparation in regard to understanding across a range of teaching approaches.

10. The strongest areas of understanding were shown to be in use of resources whereas the weakest areas of understanding were in the less tangible areas of skills and capabilities for an individual to lead a constructive life and a set of social ideals by which to live ones life.

Table 15 **Student Teacher Understanding of the Course Content**

The teacher education course gave you a good understanding in … (ST.Qu.11)	Yangon IOE		Sagaing IOE	
	Mean	Interpretation	Mean	Interpretation
How to use resources to improve your knowledge and practice	**3.51**	To a major extent	**3.37**	To a major extent
How to assess existing understanding knowledge and experience of children you are going to teach	3.25	To a major extent	3.33	To a major extent
The content areas you were qualified to teach	3.33	To a major extent	3.22	To a moderate extent
How to build on children existing knowledge and experience	3.37	To a major extent	3.24	To a moderate extent
How to integrate current developments to your teaching	3.19	To a moderate extent	3.25	To a major extent
Individual differences in children approaches to learning	3.24	To a moderate extent	3.11	To a moderate extent
The specific skills and capabilities for action that allow an individual to live a constructive life	3.14	To a moderate extent	**2.93**	To a moderate extent
A set of social ideals, a commitment to them, and an understanding of how to implement the ideals	**3.01**	To a moderate extent	2.98	To a moderate extent

Range definitions: 1.00-1.74 = Not at all, 1.75-2.49 = A minor extent, 2.50-3.24 = Moderate extent, 3.25-4.00 = Major extent

Student teacher perception of professional skills development (ST.Qu.12)

Table 16 **Student Teacher Perception of Preparedness to Teach**

The extent to which your teacher education course prepared you to develop professional skills … (ST.Qu.12)	Mean	Interpretation
Encourage your children to use a variety of critical thinking skills	**3.66**	A major extent
Develop questions to challenge students and promote higher order thinking	3.43	A major extent
Read professional literature (e.g. journals, evidence-based papers, project paper, thesis papers)	3.40	A major extent
Enhance children confidence and self-esteem of children	3.49	A major extent
Give useful and timely feedback to children about their learning	3.35	A major extent
Engage in discussions about the learning development of specific children	3.27	A minor extent
Teach currently needed skills and knowledge that are matched with the school curriculum	3.20	A minor extent
Engage in informal dialogue with your classmate to understand teaching methodology.	**3.08**	A minor extent

Range definitions: 1.00-1.74 = Not at all, 1.75-2.49 = A minor extent, 2.50-3.24 = Moderate extent, 3.25-4.00 = Major extent

11. Student teachers indicated that in their view the teacher education course had prepared them

well for development of professional skills. Encouraging children to use a variety of criticial thinking skills showed as a strong area of preparedness among student teachers whereas engaging in dialogue with colleagues to understand teaching methodology showed as the weakest area of professional skills development covered in the teacher education course.

Student teachers' rating of assessment methods in assessing children's learning (ST.Qu.14)

12. Interestingly student teachers considered that childrens' test scores are only of moderate importance, whereas childrens' behaviour, their feedback on teaching and the teachers own assessment of the quality of her teching and achievement of teaching objectives were considered of high importance.

Table 17   **Importance of methods of assessment of children's learning**

How important are the following aspects of assessment in assessing childrens' learning? (ST.Qu.14)	Mean	Interpretation
Children's behaviour	**3.53**	High importance
Make careful judgments about the quality of work that I completed.	3.50	High importance
Children's feedback on my teaching	3.47	High importance
The objective is consistent with my method courses.	3.35	High importance
Feedback from parents about their children	3.21	Moderate importance
Extra-curricular activities with children (e.g. school plays and performances, sporting activities)	3.19	Moderate importance
Ensure common standards for assessing children's progress	3.21	Moderate importance
Children's test scores	**2.84**	Moderate importance

Range definitions: 1.00-1.74 = Not considered at all, 1.75-2.49 = Considered with low importance, 2.50-3.24 = Considered with moderate importance, 3.25-4.00 = Considered with high importance

Use of ICT in teacher education institutions and in teaching (ST.Qu.15)

Table 19   **Student teacher use of ICT in teaching**

Student teacher perceptions of the use of ICT in teaching (ST.Qu.15)	Mean	Interpretation
Student teachers should use educational technology in various teaching and learning activities in the IOE (e.g., word processing, spread sheets, games)	3.62	Strongly Agree
Student teachers should know how to use ICT when participating in various activities	3.60	Strongly Agree
Student teachers should understand suitable usage of ICT for themselves	3.58	Strongly Agree
Student teachers should learn how to use computers to aid their teaching	3.56	Strongly Agree
Student teachers should understand the various impacts of ICT use on children	3.52	Strongly Agree
Student teachers should use ICT when carrying out the different kinds of assessment	3.21	Somewhat agree

Range definitions: 1.00-1.74 = Strongly Disagree, 1.75-2.49 = Somewhat Disagree, 2.50-3.24 = Somewhat Agree, 3.25-4.00 = Strongly Agree

13. Student teachers strongly agreed that there should be opportunity in teacher education courses for students to learn ICT skills for their personal knowledge and understanding and also for appropriate use to aid their teaching. Consideration needs to be given to the opportunities that student teachers will actually experience in being able to apply their learning of ICT skills and applications in teaching given that there is unlikely to be widespread
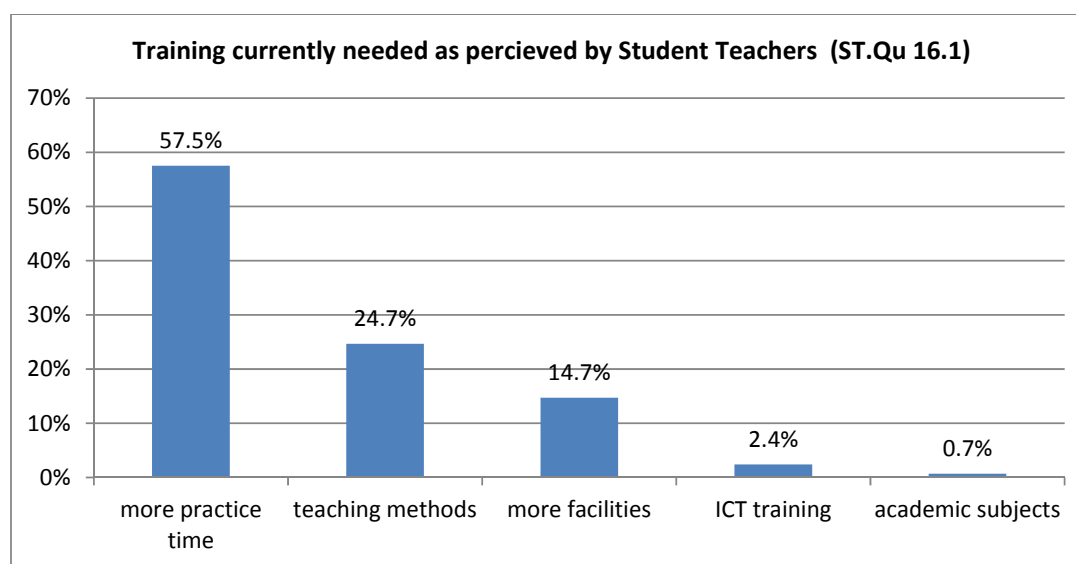
access to computers and internet connectivity in the near future due to financial constraints and school locations without electricity. There already exists a "digital divide" between urban and less poor populations where many secondary school students already have IT access both in and out of school, compared to students in rural and poor communities. This inequity is a further challenge to be considered in prioritising ICT in secondary school education.

Perceptions of Secondary Teacher Education Curriculum (ST.Qu 16.2)

14. Comparison of student teacher responses to the question whether the quality of the curriculum is satisfactory indicates that more than half the students consider that the current curriculum is not satisfactory. SIOE students showed a higher level of dissatisfaction with the secondary teacher education curriculum (68.4%) than did YIOE students (46.8%).

IOE Curriculum	Satisfactory YES	Satisfactory a little	SatisfactoryNO	Total
YIOE	40	19	52	111
	36.0%	17.1%	**46.8%**	100.0%
SIOE	25	11	78	114
	21.9%	9.6%	**68.4%**	100.0%
Overall	65	30	130	225
	28.9%	13.3%	**57.8%**	100.0%

Student Teacher Perceptions of training needed and assessment activities (ST.Qu 16.1 & 16.4)

Training currently needed as percieved by Student Teachers (ST.Qu 16.1)

- more practice time: 57.5%
- teaching methods: 24.7%
- more facilities: 14.7%
- ICT training: 2.4%
- academic subjects: 0.7%

15. In both open ended question 16.1 training currently needed and question 16.4 activities to improve assessment student teachers identify more practice time as the priority area. Training needs also include improved teaching methodology and more facilities.

16. In addition to the priority for increased practicum identified by 45% of student teacher respondents as important, the use of oral assessment and critical and creative thinking were also suggested as ways to improve student teacher assessment.

Student Teacher perception of activities to improve student teacher assessment (ST.Qu 16.4)
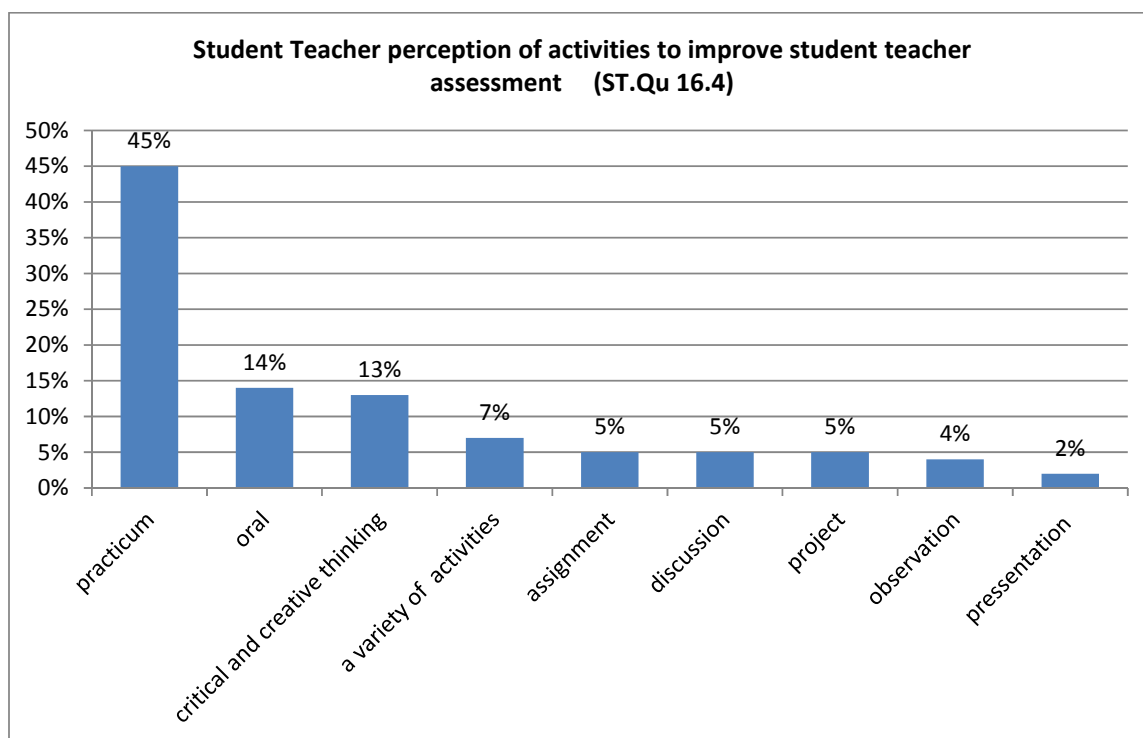
Assessment Activities used to assess Student Teachers in IOEs (Lect.Qu 13)

The activities to assess student teachers (Combined three institutes)				
Do teacher educators conduct the following activities to assess student teachers? (Lect.Qu.13)	**N**	**Mean**	**SD**	**Frequency of student assessment**
Direct appraisal of my classroom teaching	105	4.71	0.7	Once a month
Check by asking open questions to the student teachers to find out whether or not the subject matter has been understood	112	4.29	0.7	3-4 times per year
Student feedback in my teaching	112	4.21	0.9	3-4 times per year
Student test scores	142	3.94	0.8	3-4 times per year
Observe other teachers' classes and provide feedback	99	3.82	0.8	3-4 times per year
Participation in extra-curricular activities at the institute	121	3.79	1.1	3-4 times per year
Ensure common standards for assessing student teachers' progress and achievement	109	3.65	0.9	3-4 times per year
Administer authentic assessment to detect student learning (eg. Portfolio, project, case-study)	102	3.26	1.2	Once per year
Other student learning outcomes and individual competencies	91	3.22	0.9	Once per year
Retention and pass rate of students	105	2.47	0.8	Once per year

Range Definitions: 1-1.74= Never, 1.75-2.49= Less than once a year, 2.50-3.49= Once per year, 3.50-4.49= 3-4 times per year, 4.50-5.25= Once a month, 5.26-6.00= Once a week

17. **Finding – lecturers use of assessment activities** is most frequently focused on their appraisal of their own classroom teaching. They indicated that use of more continuous assessment activities such as use of open questions and student feedback were used much less frequently on average. Retention and pass rate of students is undertaken once a year on average as would be expected as is use of assessment such as portfolio and project work to detect student learning. It is not clear from these responses how the lecturers have understood and interpreted each statement but there would appear to be a lack of focus on continuous assessment of course work. Further in-depth analysis would be needed to explore and understand the present methods of assessment and how these might be improved in future to align with new approaches to assessment that will be introduced into secondary schools during the reform process.

Main Challenges for Student Teachers (ST.Qu 16.3)

18. The main challenges identified by student teachers also indicate a desire to have more opportunity for practical teaching experience.
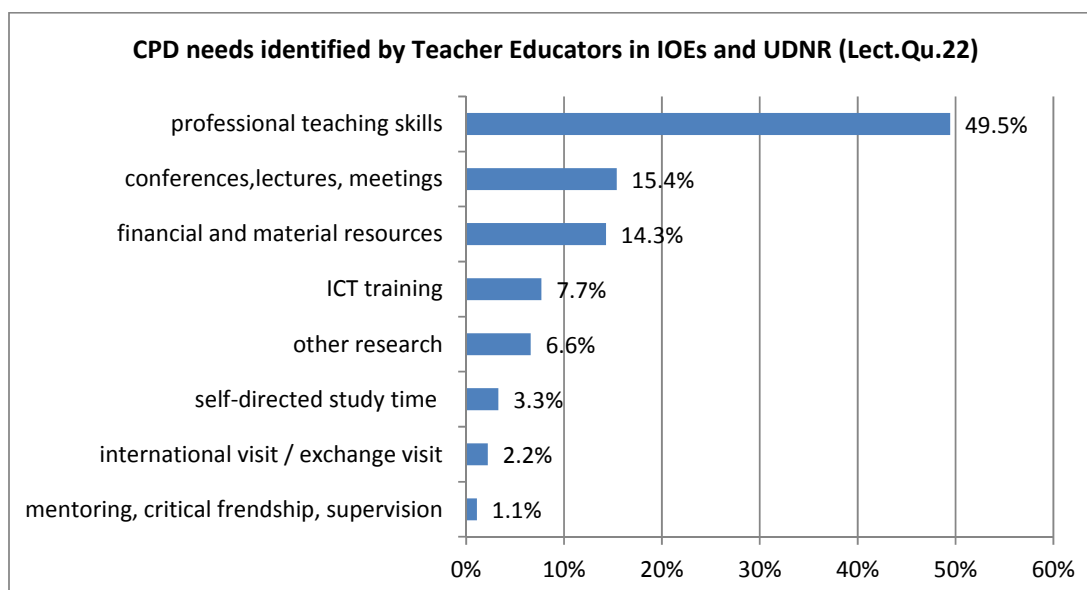
Main challenges identified by Student Teachers (ST.Qu 16.3)

Challenge	Percentage
teaching methods	31.9%
practice / practical	29.7%
not enough facilities	13.8%
use of ICT	9.1%
language	6.5%
age	4.7%
exam system	4.3%
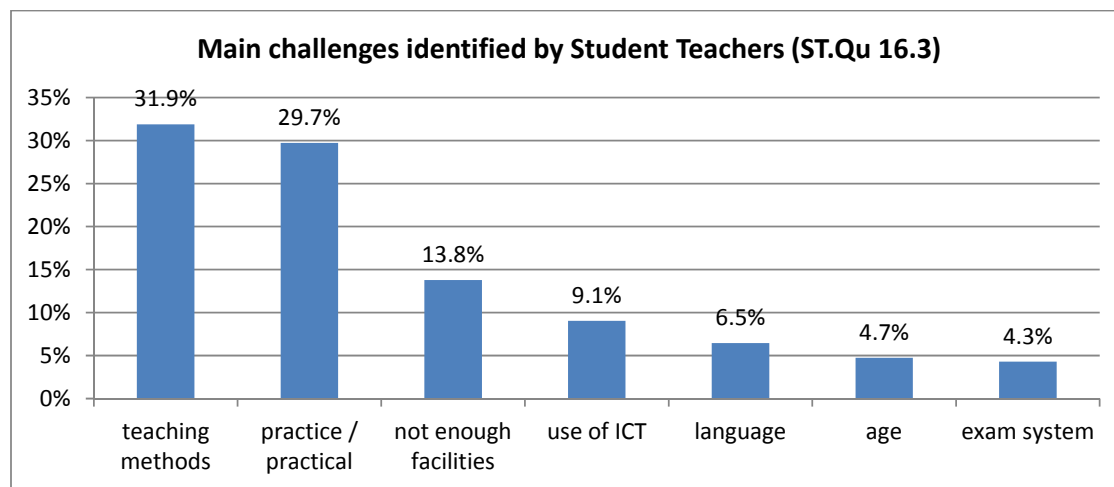
CPD for Teacher Educators and Professors

19. 76% of professors indicated that they organise professional development meetings. Half of the professors conduct weekly meetings with their staff. All the professors indicated that they observe lecturers in their specialisation at least once a month and 49% of them observe in classes once a week.
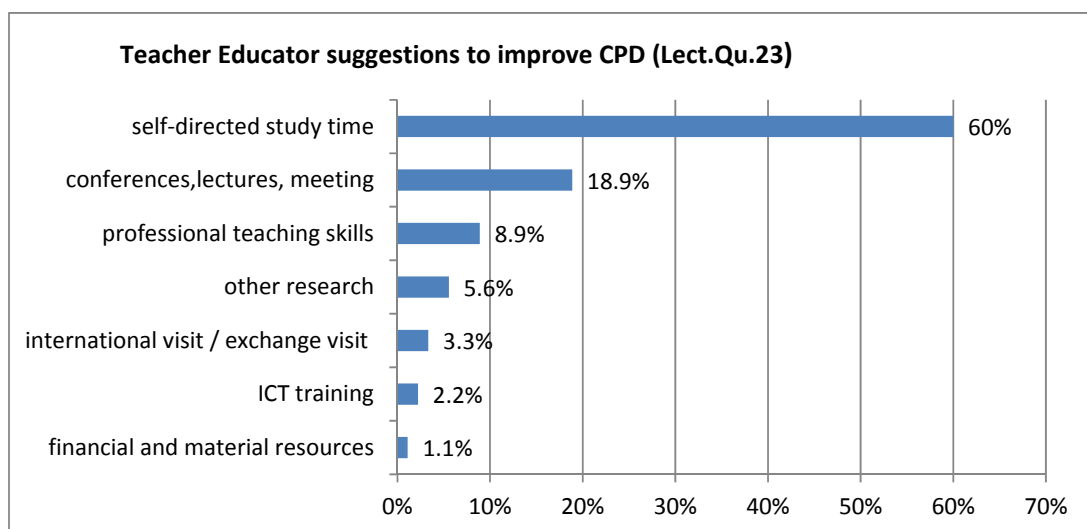
CPD needs analysis for Teacher Educators – lecturers in IOEs and UDNR (Lect.Qu.22)

20. Teacher Educators were asked to identify key areas of CPD they would like to receive in the next few years. Almost half of the Teacher Educators indicated that they would like the opportunity to improve their professional teaching skills. Two other areas of interest for Teacher Educator CPD were listed as professional conferences, lectures with other colleges and universities, group activities, collaborative learning, work series and departmental meeting, and additional financial resources and teaching-learning materials.

CPD needs identified by Teacher Educators in IOEs and UDNR (Lect.Qu.22)

Category	Value
professional teaching skills	49.5%
conferences,lectures, meetings	15.4%
financial and material resources	14.3%
ICT training	7.7%
other research	6.6%
self-directed study time	3.3%
international visit / exchange visit	2.2%
mentoring, critical frendship, supervision	1.1%

Suggestions to Improve CPD for IOE and UDNR Lecturers (Lect.Qu.23)

21.   Nearly two-third of the Teacher Educators indicated that they would like to have more time to study self – directed study/ learning for their continuous professional development (qu.23). Conferences, lectures with other colleges and universities, group activities, collaborative learning, work series, departmental meeting are also indicated as the second most interesting areas for teacher educators to improve their continuous professional development.

Teacher Educator suggestions to improve CPD (Lect.Qu.23)

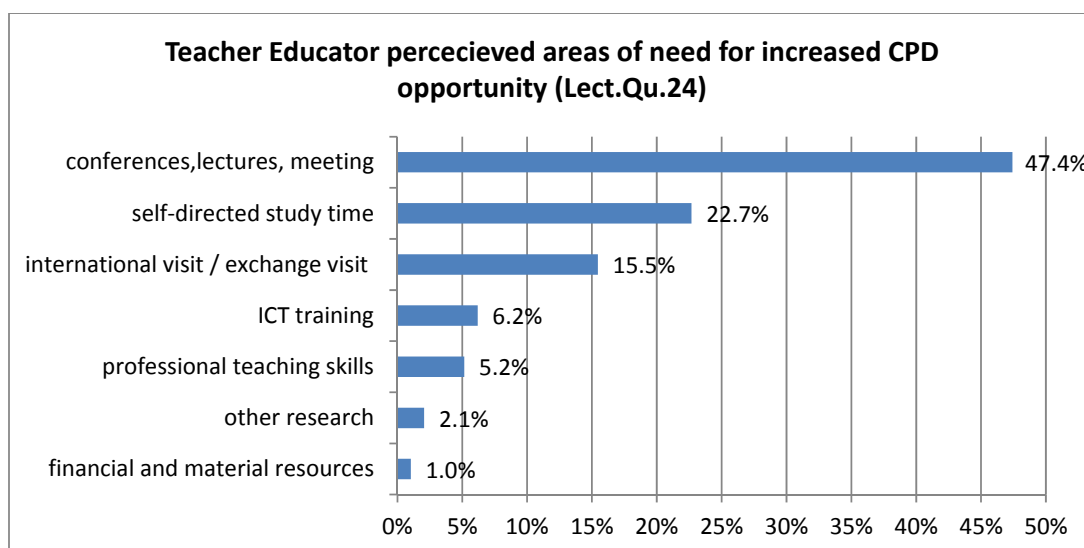| Category	Value
self-directed study time	60%
conferences,lectures, meeting	18.9%
professional teaching skills	8.9%
other research	5.6%
international visit / exchange visit	3.3%
ICT training	2.2%
financial and material resources	1.1%

22.   Activities that promote self-directed study opportunity would include activities such as:

- Research / literature review
- Library / internet access to study international best practice
- On-line courses
- Observation
- Action research project
- Review of professional performance

- Work plan review and personal improvement plan
- Research into new education theory and practice in own professional area
- Writing a professional paper
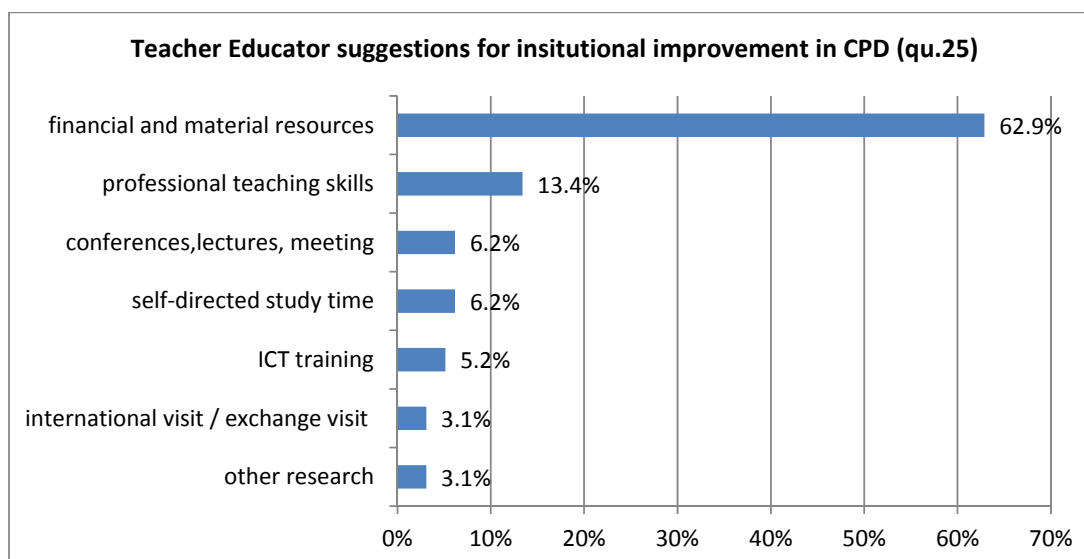- Self-taught IT skills practice and development

Priorities for Improved CPD Opportunity (Lect.Qu.24)

23. The IOE and UDNR Teacher Educator survey revealed that the teacher educators would like increased opportunities for participation in CPD by means of conferences, lectures and meetings, time allocated to self-directed study, and opportunity for international visits and exchange visits for improved continuous professional development (Lect.Qu.24).

Teacher Educator percecieved areas of need for increased CPD opportunity (Lect.Qu.24)

Category	Value
conferences,lectures, meeting	47.4%
self-directed study time	22.7%
international visit / exchange visit	15.5%
ICT training	6.2%
professional teaching skills	5.2%
other research	2.1%
financial and material resources	1.0%

IOE and UDNR Institutional improvement in CPD (Lect.Qu 25)

24. For 63% of teacher educators the main requirement to enable improvements in CPD in their institute relates to the need for financial resources and teaching-learning material. This would contribute to strengthening of not only the pre-service teacher education but also in-service teacher education programs.

Teacher Educator suggestions for insitutional improvement in CPD (qu.25)

Category	Value
financial and material resources	62.9%
professional teaching skills	13.4%
conferences,lectures, meeting	6.2%
self-directed study time	6.2%
ICT training	5.2%
international visit / exchange visit	3.1%
other research	3.1%

Strengths and Weaknesses of the current IOE and UDNR Institute Curriculum (Lect.Qu.9)

Strengths and weaknesses of the present curriculum (Combined three institutes)				
How well does the present curriculum content address each component of teacher education (Lect.Qu.9)	N	Mean	SD	Strengths and weaknesses
The institute curriculum makes relevant and clear links with between theoretical and practical aspects of teaching	152	3.61	0.7	Well
Teaching resources, content are matched with institute curriculum	151	3.52	0.6	Well
The institute curriculum is aligned with the school curriculum	150	3.46	0.7	Adequately
The student teachers learn child centered educational theories appropriately related with subject matter	148	3.33	0.7	Adequately
The institute uses student teacher centered educational theories appropriately related with subject matter	148	3.24	0.6	Adequately
The institute curriculum helps student teachers to develop higher level thinking skills, critical thinking skills and problem solving skills	152	3.23	0.7	Adequately
The institute curriculum builds on student teacher's experiences, interests and abilities	149	3.22	0.6	Adequately
The institute curriculum addresses learning needs and/or difficulties of student teachers	147	3.15	0.7	Adequately
The institute curriculum enables teacher educators to choose different learning strategies to meet the needs of different levels of student teachers	151	3.07	0.7	Adequately
The institute curriculum is aligned with individual student needs	150	3.04	0.5	Adequately

Range Definitions: 1.00-1.49 = Not at all ,1.50-2.49 = Poorly, 2.50-3.49 = Adequately,3.50-4.49 = Well,4.50-5.00 =Very well

25. To investigate how well the present curriculum content addresses each of the above components of teacher education, mean values and standard deviation are used to compare these variations. These comparisons are shown in the above table. There are 10 items regarding strengths and weakness of the present curriculum. According to this table, the mean value of the institute curriculum makes relevant and clear links with between theoretical and practical aspects of teaching is (3.61) and teaching resources, content are matched with institute curriculum is (3.52). Therefore, as a regard of strengths and weaknesses of present curriculum, the institute of curriculum makes relevant and clear links between theoretical and practical aspects of teaching and teaching resources. The majority of teacher educators mentioned that contents matched with institute curriculum are stronger than the other items. On the other hand, there are no poor curriculum contents in teacher education according to the other items adequately shown by the mean values.
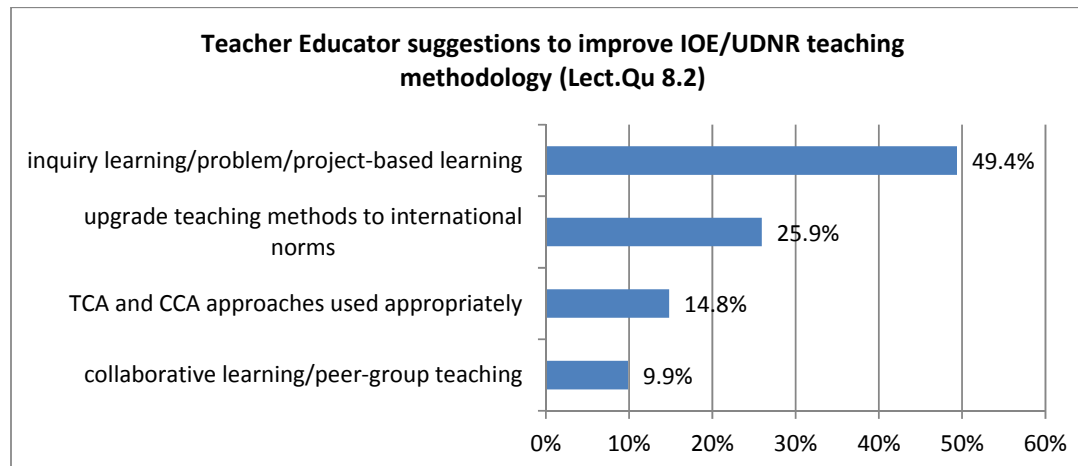
Suggestions for improvement in the IOE/UDNR curriculum content (Lect.Qu 8.1)

26. More than two thirds of teacher educators prioritised upgrade of the IOE / UDNR curriculum to make it more relevant to the needs of individual secondary school teachers and aligned with basic education reform.
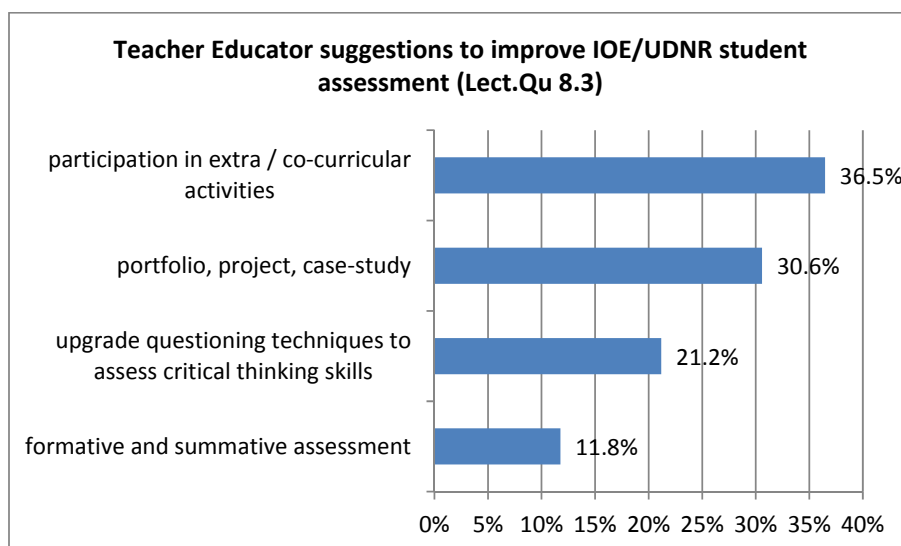
Teacher Educator suggestions to improve IOE/UDNR subject content (qu 8.1)

upgrade IOE curriculum	67.5%
meet individual learning needs	13.8%
develop specific skills and capabilities	7.5%
combine a variety of subject matters	6.3%
promote different learning strategies	5.0%

0% 10% 20% 30% 40% 50% 60% 70% 80%
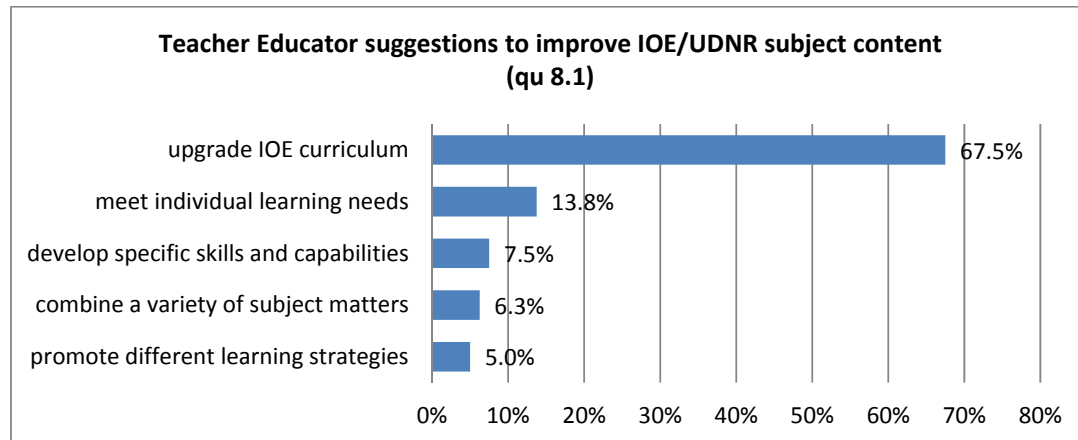
Suggestions for improvement in the IOE/UDNR teaching methodology (Lect Qu 8.2)

27. Nearly 50% of teacher educators identified inquiry learning, problem and project-based learning as the focus for improvement of teaching methodologies. The second and related aspect to be improved is the upgrade in teaching methodologies to align with international and/ or ASEAN standards.

Teacher Educator suggestions to improve IOE/UDNR teaching methodology (Lect.Qu 8.2)

inquiry learning/problem/project-based learning	49.4%
upgrade teaching methods to international norms	25.9%
TCA and CCA approaches used appropriately	14.8%
collaborative learning/peer-group teaching	9.9%

0% 10% 20% 30% 40% 50% 60%

Suggestions for improvement in the IOE/UDNR student assessment methodologies (Lect.Qu 8.3)

28. Teacher educators identified participation in extra/co-curricular activities and assessment of portfolio, project and case-study course work as the most important areas of student teacher assessment to be improved. More than one fifth of teacher educators also identified the need to upgrade questioning techniques to enable assessment of critical thinking skills. In addition, comments from teacher educators indicated that a better balance is needed between formative assessment of school practicum, written tests and course work assignments with summative assessment through end of year and end of course examination results. This is considered by some teacher educators as a means to better integrate assessment of theory and practice.

Teacher Educator suggestions to improve IOE/UDNR student assessment (Lect.Qu 8.3)

Category	Percentage
participation in extra / co-curricular activities	36.5%
portfolio, project, case-study	30.6%
upgrade questioning techniques to assess critical thinking skills	21.2%
formative and summative assessment	11.8%

Other suggestions for improving IOE/UDNR curriculum (Lect.Qu 8.4)

29. Teacher educators identified continuous professional development as a priority for improvement in IOEs and UDNR to ensure their skills and knowledge matched both the school and institute curriculum and to support reform of the Teacher Education programs. Two other areas of improvement, each one identified by 12 of the IOE/UDNR respondents are improved infrastructure and teaching learning materials, and improved English language proficiency and ICT trainings. These improvements would enable IOEs and UDNR teacher educators to keep pace with the needs of secondary teachers, to have the necessary competencies to deliver an education curriculum that meets quality standards and relevance as the basic education reforms are introduced into schools.

Other suggestions from Teacher Educator on ways to improve IOE/UDNR curriculum (Lect.Qu 8.4)

Category	Percentage
CPD for teacher educators	45.5%
english language proficiency and ICT…	15.6%
infrastructure and teaching learning…	15.6%
attitudes to all round development	11.7%
refresher courses	6.5%
linking theory with practice	3.9%
administration and supervision	1.3%
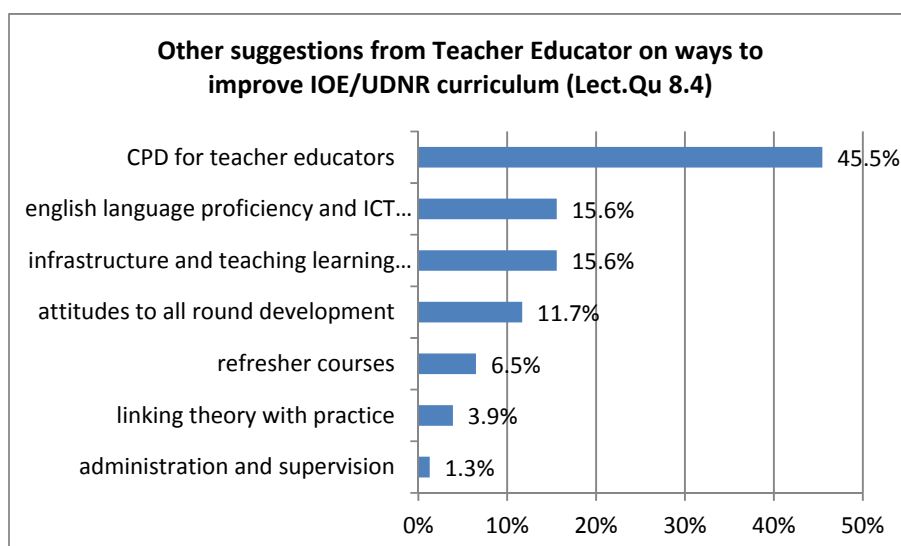
Findings from Professor questionnaire responses

30. Language proficiency: 91% of professors, associate professors and Heads of Department in the IOE and UDNR Teacher Education survey speak English as a foreign language. 77% of professors, associate professors and Heads of Department in the IOE and UDNR Teacher Education survey indicated that they use both Myanmar and English in their teaching. 19% of the professors use only Myanmar language as the main language in their teaching, and 4% (2 professors from UDNR) use the local / ethnic language as the main language in their teaching.

31. **Infuence of teaching staff on management decisions (Prof.Qu.19)** The professors were asked to consider the extent to which teaching staff at the IOEs have an influence in key management tasks within the institution. In the view of the professors teaching staff have a high level of influence on educational decisions, setting discipline policy and curriculum development. Involvement in development of CPD content, evaluation of teachers and school budget decisions is more varied suggesting less influence most probably according to level of seniority though the sample size is too small to investigate this hypothesis.
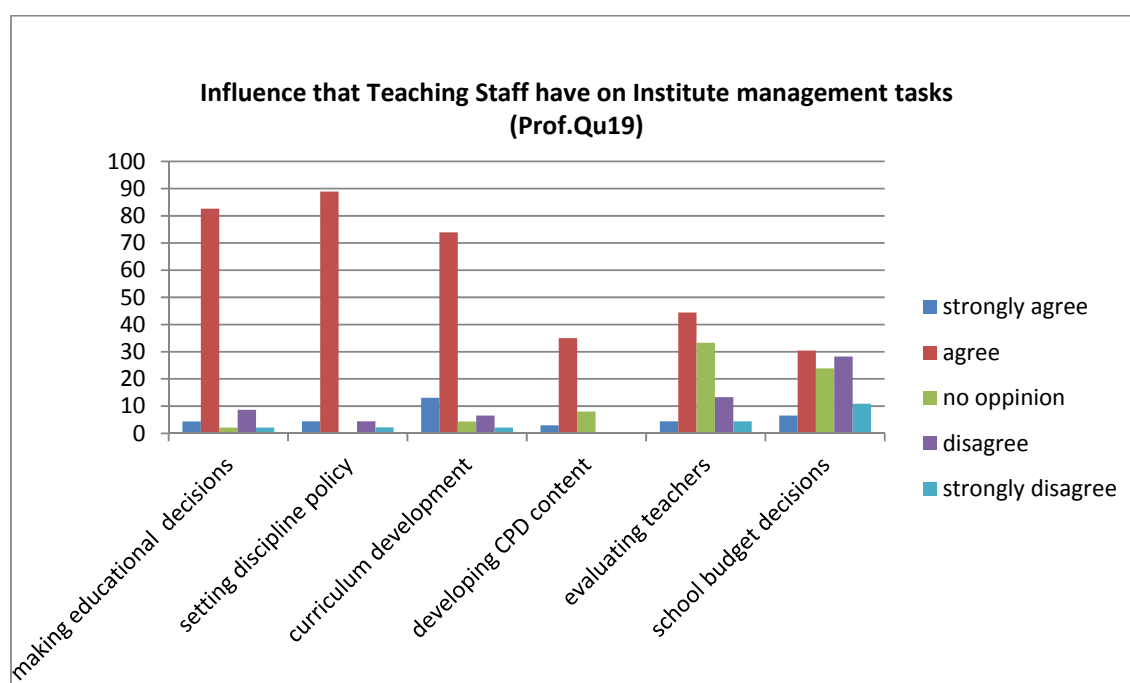
32. **Management of curriculum and teaching staff (Prof.Qu.20)** Professors were asked to indicate the extent to which they consider they have control over various aspects of curriculum and teaching staff management. There is a clear indication that the professors consider they have strong control over all aspects of curiruclum management surveyed, especially in selection of teaching methods, evaluation and grading of students and determining homework allocation. The weakest area of control in the items surveyed is selection of content, topics and skills. This is the remit of the curriculum expert panel of professors from BOS. In each Institute, the professors have guidelines for instructional practices and was encouraged to try out new ideas in teaching specialization by the rector. They enhance their administration by providing the materials and equipment that they need from rector.

Professors view of the control they have in curriculum management (Prof.Qu.20)
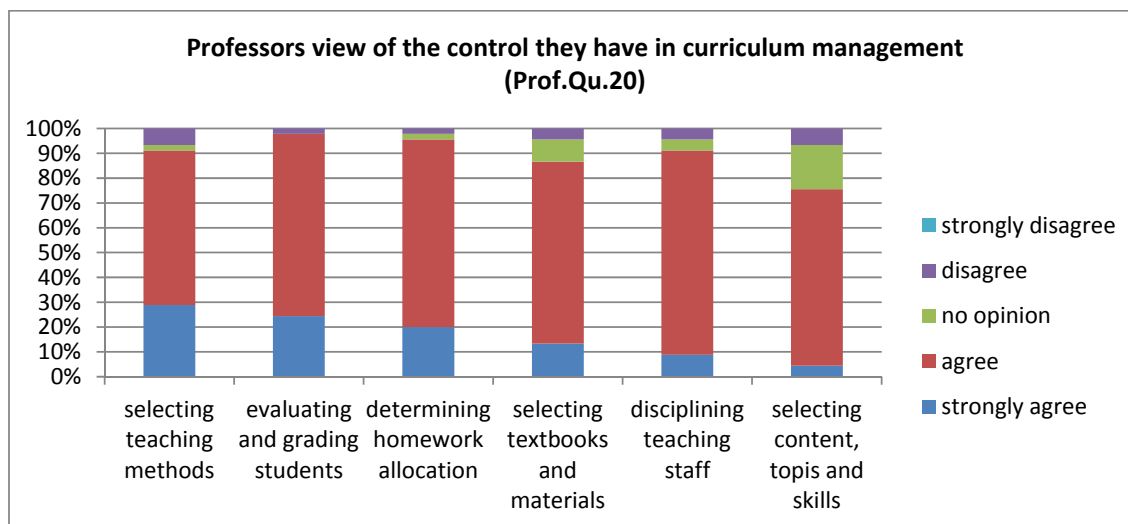
33. Professors indicated general agreement in their survey response that the students must learn basic skill before they can be expected to analyze, compare and generalize. At the same time it is considered important for teachers to encourage children to find their own strategies to solve problem even if the strategies they have are insufficient (Prof.Qu.22m+22o).

ANNEX 3   INTERNATIONAL BEST PRACTICE – QUALITY ASSURANCE AND STANDARDS

OUTLINE OF ENTRY CRITERIA AND PATHWAYS TO TEACHING IN UK

Source: http://www.prospects.ac.uk/secondary_school_teacher_entry_requirements.htm

A Postgraduate Certificate in Secondary Education (PGCE) or Professional Graduate Diploma in Education (PGDE) in Scotland - courses are available at many universities and colleges. Applications for most courses in England, Scotland and Wales are made via the Graduate Teacher Training Registry (GTTR) in the autumn before you wish to start. Northern Irish universities recruit directly.

School Direct (England and Wales only) - a new school-based training route which replaces the Graduate Teacher Programme (GTP). The expectation is that participants will go on to work in the school, or partnership of schools, in which they trained. In most, but not all cases, a PGCE accredited by a higher education institution (HEI) will be awarded.

School-centred initial teacher training (SCITT) (England and Wales only) - schools devise their own training programme in partnership with their local education authority (LEA) and an HEI.

The Teach First scheme gives the opportunity to teach for two years in challenging schools and complete a PGCE, after which you can either stay in teaching or move on to roles in the public sector or business.

To teach in Scotland, Wales or Northern Ireland, you must be registered with the relevant teaching council:

Candidates with a teaching qualification from an EU country are permitted to work as teachers in the UK. The Overseas Trained Teacher Programme (OTTP) offers trained teachers from non-EU countries the opportunity to gain QTS while working as teachers in England. Teachers who qualified in Australia, New Zealand, Canada and the USA are automatically able to teach in England without any further training.

Further education lecturers who have been awarded Qualified Teacher Learning and Skills (QTLS) status by the Institute for Learning (IfL) and are IfL members are also able to work in maintained secondary schools as qualified teachers in England.

Although training is open to all graduates, a degree related to a national curriculum subject increases your chances of getting a training place. Your pre-university education may also be taken into account. Some institutions offer subject knowledge enhancement (SKE) courses for shortage subjects if you have already been accepted onto a PGCE course. Current shortage subjects are mathematics, physics, chemistry and modern foreign languages. For details, see the Teaching Agency.

Candidates need to show evidence of the following:

- classroom experience as an observer or classroom assistant, for example through the School Experience Programme (SEP) . Many secondary schools are also happy to accept volunteer work experience placements;

- experience with children, e.g. through sports, play schemes, summer camps, youth clubs, tutoring or mentoring;

- familiarity with the national curriculum for your subject;

- enthusiasm, motivation, commitment and strong communication skills.

 Teacher training providers set their own entry requirements, which always include GCSE grades A-C in English and mathematics. Additionally, you will need to demonstrate satisfactory health and Disclosure and Barring Service (which replaces the Criminal Records Bureau (CRB)) checks. If you do not have these qualifications, approach institutions before submitting an application as some offer

special tests for such applicants. Trainee teachers must also pass national skills tests in numeracy and literacy before starting their induction year. From July 2013, you will be required to take these tests as part of the ITT application process and must pass the tests before starting your course.

CRITERIA FOR EVALUATING TEACHER PERFORMANCE

Source: http://www.ccboe.com/PDF/TeacherEvaluationCriteria.pdf

I. LEVEL OF KNOWLEDGE

A. PREPARATION

1. SPECIFIC KNOWLEDGE – The teacher:

a. maintains broad, accurate and organized knowledge of subject matter.

b. is knowledgeable of appropriate resources.

c. is knowledgeable of appropriate curricula.

2. GENERAL KNOWLEDGE – The teacher:

a. is knowledgeable of appropriate and current theories and practices.

b. is knowledgeable about the intellectual and social developmental stages of children.

c. is knowledgeable of how content areas relate to each other.

d. is knowledgeable of higher level thinking skills.

3. COMMAND OF LANGUAGE – The teacher:

a. models communication skills effectively and accurately.

B. EVIDENCE OF PROFESSIONAL GROWTH

1. participates in professional development activities such as coursework, in service, academic readings, travel, cultural exchange

activities, professional organizations and other enrichment activities.

2. continues to develop a general understanding of educational technology and its relationship to the instructional process.

II. TEACHING POWER & INSTRUCTIONAL EFFECTIVENESS

A. SELECTION AND ORGANIZATION OF SUBJECT MATTER – The teacher:

1. has clear goals and objectives and clearly communicates them.

2. maintains compatibility with county curriculum.

3. adapts subject matter to student needs, interests and abilities.

4. teaches prerequisite skills.

5. recognizes the sequence in which skills are developed.

6. establishes relationships between content areas.

7. promotes parental understanding and cooperation.

B. MOTIVATION – The teacher:

1. develops student interest in learning

2. uses appropriate problem solving strategies to develop higher level thinking skills.

3. clearly communicates common goals to students.

4. demonstrates sensitivity to the academic and social needs of students.

5. promotes student interest and participation in extra-curricular activities.

C. LESSON DEVELOPMENT & IMPLEMENTATION – The teacher:

1. appropriately allocates time, energy and resources.

2. uses teacher and student experiences for the enrichment of content.

3. organizes daily plans as a part of a larger unit.

4. adapts instruction to unexpected situations.

5. simulates student learning through varied questioning techniques.

6. treats student responses appropriately.

7. complies with system policy regarding nature and use of assignments.

8. directs supervised study.

9. uses a variety of effective and realistic forms of student assessment and evaluation.

10. adapts lessons based on immediate analysis of student responses.

11. develops instructional approaches to improve student test taking skills.

III. EXECUTIVE ABILITY & MANAGEMENT SKILLS

A. CLASSROOM MANAGEMENT – The teacher:

1. organizes the classroom to fit different learning situations.

2. applies classroom rules and procedures fairly and consistently.

3. effectively encourages positive student behavior.

4. maintains positive learning climate for students.

5. organizes effective transitions for students.

6. involves parents, staff, and other agencies as appropriate.

B. PERSONAL ORGANIZATION – The teacher:

1. plans appropriately

2. proficiently performs required duties.

3. makes appropriate and timely decisions.

4. appropriately organizes, cares for, and utilizes equipment and materials.

5. utilizes technology to personally manage daily tasks.

IV. PROFESSIONAL RESPONSIBILITY, ETHICS & INTERPERSONAL RELATIONSHIPS – The teacher:

1. demonstrates understanding for discretion in the use of confidential information.

2. shows understanding and sensitivity in working with school personnel.

3. acknowledges the importance of the group decision making process.

4. observes school practices and administrative procedures such as designated school hours, punctuality, and attendance.

5. demonstrates an interest in students and their welfare.

6. maintains appropriate appearance.

7. displays self-control, initiative, confidence, and flexibility.

8. maintains effective and appropriate communications with students, parents and co-workers.

9. evidences integrity and understands the established conventions of the school and the community.

10. treats students and staff fairly.

11. uses self-evaluation for improvement.

ANNEX 4   INTERNATIONAL BEST PRACTICE – CPD

CPD is what teachers do to keep their professional practice fresh, up-to-date and stimulating. We believe that by undertaking a wide range of CPD experiences, teachers are more likely to inspire pupils and teach more effectively, enabling pupils to achieve their best.

A teaching profession for the 21st Century

"A Teaching Profession for the 21st Century" emphasised that CPD should not only meet the needs of the school but also the needs of the individual teacher. It expresses this clearly by:

giving teachers the right to an annual PRD interview focusing on their strengths and areas for development

making this the basis for an annual CPD plan, agreed in collaboration with senior colleagues

requiring teachers to undertake 35 hours of CPD each year, based on a mix of personal, school and local authority needs

supporting the concept of the reflective practitioner by introducing the CPD portfolio to record and reflect upon the teacher's CPD experiences

What is CPD?

Continuing

CPD is a cyclical process that allows teachers to reflect on what they've learned and then consider what skills or qualities they want or need to develop next. It's not ad-hoc, rather something that is thoughtful and planned from a career long perspective.

Professional

CPD activity should focus on developing the qualities and capabilities that define what it is to be a teacher. As well as enhancing these qualities and capabilities, as a professional it's also important that teachers maintain their knowledge of policy developments at a local and national level.

Development

CPD shouldn't be seen as a box ticking exercise that shows that a set of requirements have been met. To be effective it should be about refreshing and enhancing your professional practice.

The professional journey

CPD is a professional journey with the journey beginning during a teacher's university studies and the Standard for Initial Teacher Education. It then moves on, as the teacher becomes a probationer teacher and works towards the Standard for Full Registration and then onto Chartered Teacher and perhaps Headship.

Source: http://www.gtcs.org.uk/professional-development/cpd.aspx

Types of CPD experience

CPD is more than just *'going on a course'*. There are many innovative, exciting and new approaches there, both formal and informal, that can contribute to your professional development.

What's important is that there's a purpose to every CPD activity you do, and you should identify in advance what it is you want to get out of it.

We've put together some information we hope you find useful:

Learning from others

Learning from others can be as simple as working together with another teacher who either has more experience or particular expertise in an area you want to develop.

Have you thought about team teaching or observing a colleague then getting together afterwards to discuss what you've learned? This could even be done in another school.

More lengthy experiences could include going on a teacher exchange (international or other) or carrying out a placement or study visit in another school or work setting.

Additional reading, scholarly activity, or study

You can choose to study a particular aspect of teaching more thoroughly by yourself to:

enhance your subject expertise

deepening your understanding of a particular learning theory

learn more about different teaching methodologies

Through research

Professional Inquiry is an integral part of your professional development. As an extension of your reflective practice, you could look more deeply at an issue in your school or classroom.

This could be an evaluation of an initiative such as the use of a new learning resource to discover what its impact has been, especially on pupil attainment.

Or you might work collaboratively with colleagues to assess pupils' responses to a new approach to teaching a particular subject. Collaborative research has been shown to be even more beneficial to professional development than investigating on your own.

In some local authorities there are Professional Inquiry networks to bring teachers together for mutual support. It could be worth checking if one operates in your area. Or you could consider joining the Scottish Educational Research Association, through which you can make links with the academic research community.

GTC Scotland supports teachers to become involved in research through our Teacher Researcher Programme.

Taking on an additional role or duty

Another way of obtaining valuable CPD is to initiate or become involved in specific project or groups, whether at school, local authority or national level.

This could involve you in curriculum or policy development or taking forward a particular issue such as health promotion or involving parents in their child's learning.

Source: http://www.gtcs.org.uk/professional-development/types-of-cpd.aspx

Professional Recognition

Professional recognition allows registered teachers to focus their CPD in particular areas of interest, and gain recognition for enhancing their knowledge and experience.

In order to achieve or gain professional recognition teachers need to demonstrate their professional knowledge and understanding in four key areas:

- **Subject/ Curriculum**
- **Professional knowledge**
- **Professional skills and abilities**
- **Reflecting, reporting and sharing**

What's the Framework?

The Framework for Professional Recognition explains in detail how teachers can gain professional recognition. It was established to help teachers develop their knowledge and skills and to ensure that they are able to gain the recognition they deserve.

What areas can I gain professional recognition in?

There are many areas in which primary and secondary teachers can gain professional recognition. The list below isn't exhaustive so if a specific area of interest isn't listed here please get in touch.

Curricular areas:

- **ICT**
- **Scots Language**
- **Literacy**
- **Numeracy**
- **Education for Global Citizenship**
- **Sustainable Development Education**
- **Outdoor Learning**
- **Supporting Pupil Learning**
- **Supporting Teacher Learning**
- **Mentoring and Coaching**
- **Assessment**
- **Research**

Source: http://www.gtcs.org.uk/professional-development/professional-recognition.aspx

ANNEX 5   INTERNATIONAL BEST PRACTICE – STANDARDS IN TEACHER EDUCATION

Standard for Initial Teacher Education (SITE)

The Standard for Initial Teacher Education (SITE) outlines what is expected of a student teacher at the end of Initial Teacher Education, seeking provisional registration with us.

The elements of the Standard provide a comprehensive set of benchmark statements which are the requirements for each programme of Initial Teacher Education in Scotland.

Programmes of Initial Teacher Education need to promote three main aspects of professional development:

- Professional knowledge and understanding
- Professional skills and abilities
- Professional values and personal commitment

Elements of the Standard

The Elements of the Standard specify what is expected of a student teacher at the end of Initial Teacher Education and also the design requirements for programmes of Initial Teacher Education.

1.   PROFESSIONAL KNOWLEDGE AND UNDERSTANDING

ASPECT OF PROFESSIONAL DEVELOPMENT	ELEMENT OF THE STANDARD
1.1 Curriculum	1.1.1 Acquire knowledge and understanding of the relevant area(s) of pre-school, primary or secondary school curriculum.
	1.1.2 Acquire the knowledge and understanding to fulfil their responsibilities in respect of cross-curricular themes including citizenship, creativity, enterprising attitudes, literacy and numeracy; personal, social and health education; and ICT, as appropriate to the sector and stage of education.
	1.1.3 Acquire the knowledge and understanding to enable them to plan coherent and progressive teaching programmes, and justify what they teach.
	1.1.4 Acquire an understanding of the nature of the curriculum and its development.
1.2 Education systems and professional responsibilities.	1.2.1 Acquire a broad and critical understanding of the principal features of the education system, educational policy and practice.
	1.2.2 Acquire a good working knowledge of the sector in which they teach and their professional responsibilities within it.
1.3 Principles and perspectives.	1.3.1 Draw on relevant principles, perspectives and theories to inform professional values and practices.

1.3.2 Acquire an understanding of research and its contribution to education.

2.   PROFESSIONAL SKILLS AND ABILITIES

ASPECT OF PROFESSIONAL DEVELOPMENT	ELEMENT OF THE STANDARD
2.1 Teaching and learning	2.1.1 Plan coherent, progressive teaching programmes which match their pupils' needs and abilities, and justify what they teach.
	2.1.2 Communicate effectively, using a variety of media, to stimulate pupils and achieve the objectives of lessons.
	2.1.3 Employ a range of teaching strategies and justify their approach.
	2.1.4 Set expectations and a pace of work which make appropriate demands on all pupils.
	2.1.5 Work effectively in co-operation with other professionals, staff and parents in order to promote learning.
2.2 Classroom organisation and management.	2.2.1 Organise classes and lessons to ensure that all pupils are safe and productively employed when working individually, in groups or as a class.
	2.2.2 Manage pupil behaviour fairly, sensitively and consistently by the use of appropriate rewards and sanctions and know when it is necessary to seek advice.
2.3 Pupil assessment	2.3.1 Understand and apply the principles of assessment, recording and reporting.
	2.3.2 Use the results of assessment to evaluate and improve teaching and to improve standards of attainment.
2.4 Professional reflection and communication.	2.4.1 Access and evaluate professionally relevant literature.
	2.4.2 Construct and sustain reasoned and coherent arguments about educational matters and professional practices.
	2.4.3 Reflect on and act to improve the effectiveness of their own practice and contribute to the processes of curriculum development and school development planning.

3. PROFESSIONAL VALUES AND PERSONAL COMMITMENT

ASPECT OF PROFESSIONAL DEVELOPMENT	ELEMENT OF THE STANDARD
3.0 Professional Values and Personal Commitment	3.1 Value and demonstrate a commitment to social justice, inclusion and protecting and caring for children.
	3.2 Value themselves as growing professionals by taking responsibility for their professional learning and development.
	3.3 Value, respect and show commitment to the communities in which they work.

Source: http://www.gtcs.org.uk/standards/standard-initial-teacher-education.aspx

ANNEX 6   INTERNATIONAL BEST PRACTICE – REFERENCES TO INSPECTION AND REGULATORY REQUIREMENTS FOR TEACHER EDUCATION INSTITUTIONS

1.   Initial Teacher Education (ITE) Inspection Handbook. OFSTED UK 2012

2.   Teacher Appraisal and Capability – A model policy for schools. Department of Education, UK. 2012

3.   Teacher Standards. Department of Education, UK. 2012 www.education.gov.uk/publications

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Induction for Newly Qualified Teachers (England). Statutory guidance for appropriate bodies, head teachers, school staff and governing bodies. Department of Education, UK. 2012

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GUIDANCE FOR APPROPRIATE BODIES, LOCAL AUTHORITIES, HEAD TEACHERS, SCHOOL STAFF AND GOVERNING BODIES

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Named contact at the appropriate body

ANNEX 7   INTERNATIONAL BEST PRACTICE – SECONDARY EDUCATION COURSE STRUCTURES AND CURRICULUM CONTENT

References

1. Batchelor of Education Wikipedia website : summary of B.Ed courses in North America, Australia, Bangladesh, Indi, New Zealand, Republic of Ireland, Sri Lanka, and United Kingdom.

2. University of Nottingham School of Education, UK – Post Graduate Certificate in Education (PGCE) course structure, entry requirements, course introduction, timetable and subjects

3. Moray House, Edinburgh University Post Graduate Diploma in Education (PGDE – Secondary) – core themes and course assessment structure

ANNEX 8   CHILD FRIENDLY SCHOOLS INDICATORS

Myanmar Child Friendly Schools   Process Indicators (External Criteria)

Gender-responsive

1.   The school provides all students, both boys and girls, equal access to, and opportunities for participation in all school activities.

2.   Cooperative methods are used, and girls and boys are encouraged to work together.

Inclusive

3.   Teachers use content, language and strategies in their teaching that help all students to learn regardless of their back ground or ability.

4.   The school conducts annual campaigns to encourage parents to enrol all of their school-going-age children.

5.   The school provides support to poor families to send their children to school and they are exempted from various school fees.

6.   The school has master list of all school age children in its catchment area, and knows whether they enrol or not.

7.   School has a mechanism to check regular attendance, and pay appropriate home visits by teachers when necessary to improve attendance.

Effective

8.   Lesson plans are developed with child-centered learning activities and adaptations to suit local needs and culture.

9.   Most teachers facilitate participatory learning, using a variety of interactive teaching-learning methodologies.

10.   All students have an opportunity to choose activities of their own interest that are free from the stress of competition and examinations.

11.   All children are encouraged to express their views, ideas and feelings.

12.   Each classroom has "learning corners" with learning materials easily accessible for all children.

13.   Feed back about student's work or behaviour is accompanied by positive comments about achievements and suggestions for improvement.

14.   Teachers practise positive, non-aggressive and alternative discipline.

15.   The school coordinate with communities to promote organized early learning opportunities for preschool-age children.

16.   The school has and uses a simple SMIS (School Management Information System) to monitor, know student attendance, teacher attendance, whether all school age children in school, whether all students study in school throughout a school year, and whether all students study in school up to grade 5, and level of students academic achievement

Healthy, safe, supportive and protective

17.   Adequate clean and safe drinking water is always available for all students and school personnel.

18.   Clean and well maintained toilets and hand washing facilities are available for every 50 students of each sex, and teachers.

19. The school in collaboration with the Health Department provides micro-nutrient supplements, annual health screening examination of students and ensure safe, hygienic and healthy food catching habits.

20. The school has and implement policies to provide a safe physical environment with protection from physical and biological risk (shelter, lights, heat, ventilation, traffic) (unsafe food, animal, insect, etc.)

21. School waste is properly disposed and school acts to prevent breeding of mosquitoes and other disease vectors on or near school grounds.

22. School has and enforces rules and procedures against bullying, abuse, neglect, physical punishment, violence, sexual harassment and substance abuse (drugs, alcohol, tobacco, etc.)

23. All students know where to go in the school to get psychosocial support when needed.

24. The school coordinates with the community and local authorities in (a child protection network) to ensure safety and protection of student.

25. The school implements Lifeskills-based health education including prevention of risk behaviours for substance abuse and HIV/AIDS.

26. The school ensures and establishes enabling environment for all children to apply Lifeskills to develop healthy habits and safe behaviours.

Participation

27. The school promotes active participation of children in school activities through school assemblies, class assemblies and school council.

28. Students have opportunity to play a key role to organize and facilitate the daily activities in school.

29. The school provides opportunity for children to come and discuss with teachers to express their opinion about school, and issues faced in their education.

30. Parents and community provide opportunities for the children to express their opinion and view.

31. The school promotes parents' participation in school activities (making teaching learning materials, supporting children's learning, school sanitation, utilizing local wisdom to promote local culture, etc.)

32. The school promotes regular exchange of information and discussion between teachers and parents for the attendance and performance of their children.

33. The school promotes parents' participation in decision making in implementing education activities through School Self Assessment and School Improvement Planning, and Parent Teacher Association work plans.