

**The Government of the Union of Myanmar
Ministry of Education**

Development of Education in Myanmar

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Development of Education in Myanmar

1. Introduction

The Ministry of Education is the main provider of education in the Union of Myanmar and is functioning with the vision **to create an education system that will generate a learning society capable of facing the challenges of the Knowledge Age**. The Ministry of Education is implementing short and long-term education development plans to develop a lifelong learning society. The implementation of the education development plan is not only bringing about the enhancement of the quality of higher education and promoted diversity, but it has also markedly increased accessibility to higher education.

2. The Organization, Structure and Management of the Education System

There are two main sub-sectors in the education sector — the basic education sub-sector and the higher education sub-sector.

2.1. The Basic Education Sub-sector

The Myanmar basic education school system consists of 3 years schooling at the lower primary level, 2 years at the upper primary level, 4 years at the lower secondary level and 2 years at the upper secondary level. At the end of the upper secondary level, students sit for the matriculation examination to enter the tertiary level. All basic education schools are under the supervision of the Ministry of Education. The administration and management of basic education is undertaken by the three Departments of Basic Education and the Department of Educational Planning and Training in accordance with the directives of the statutory bodies and organizations: **Basic Education Council, Basic Education Curriculum, Syllabus and Textbook Committee, and Teacher Education Supervisory Committee**.

Pre-primary education is provided by schools operated by the Ministry of Education, the Ministry of Social Welfare, NGOs and the private sector. There are 820 schools offering primary education under the Ministry of Education with an enrolment of 18998 children in the

2004-05 AY and the Ministry plans to open more such schools. The objective of pre-primary education is to offer a harmonious environment for playing, socializing, learning and preparing children for schooling. It is for children 3 to 5 years old.

Table 1: Basic Education System

Level		No. of Years	Age	Grade
Primary	Lower	3	5+ to 7+	1 to 3
	Upper	2	8+ to 9+	4 to 5
Secondary	Lower	4	10+ to 13+	6 to 9
	Upper	2	14+ to 15+	10 to 11

Source: Department of Education Planning and Training, MOE

2. 2. Higher Education Sub-sector

There are 156 higher education institutions in Myanmar. 64 institutions, which form the majority, are under the jurisdiction of the Ministry of Education while 92 institutions are under 11 other ministries and the Public Services Selection and Training Board. All the higher education institutions are state-financed. The 156 higher education institutions specialize in varied fields such as arts and science, law, economics and business education, teacher education, foreign languages, engineering, computer studies, maritime studies, defence, agriculture, forestry, veterinary science and culture and fine arts, etc. and offer a variety of programmes—undergraduate, postgraduate diploma, master’s degree programmes and doctorate programmes. Higher education institutions under the Ministry of Education have also established Centres for Human Resource Development that offer reeducation and retraining human resource development programmes ranging from short-term certificate programmes to master’s degree programmes.

There are two Departments of Higher Education — one for lower Myanmar and one for upper Myanmar. These two departments are responsible for administration and coordination of higher education institutions under the Ministry of Education.

Although higher education institutions come under the administration of different ministries, academic and administrative policy matters relating to higher education are managed by the two councils chaired by the Minister for Education. They are:

- the Universities' Central Council, and
- the Council of University Academic Bodies

The Universities' Central Council is principally responsible for the framing of broad policy and co-ordination of the work of higher education institutions while the responsibility of the Council of University Academic Bodies lies in the adoption of academic regulations and co-ordination of academic work.

Table 2: Number of Higher Education Institutions under Various Ministries in 2004-05 AY

<i>Sr. No.</i>	Ministry	Number
1	Education	64
2	Health	14
3	Science & Technology	56
4	Defence	5
5	Culture	2
6	Forestry	1
7	Agriculture & Irrigation	1
8	Livestock Breeding & Fisheries	1
9	Co-operatives	5
10	Civil Service Selection & Training Board	1
11	Religious Affairs	1
12	Progress of Border Areas & National Races and Development Affairs	2
13	Transport	3
Total		156

Source: Department of Higher Education (Lower Myanmar), MOE

2. 3 The Myanmar Education Committee

A national level coordinating decision making body called the Myanmar Education Committee was established on 2 September 1991. The committee facilitates the development of an education system which is equitable with the traditional, the cultural and the social values and also in keeping with the economic and political aspirations of the nation. This high-powered committee is chaired by the Prime Minister, and ministers of the ministries that administer education institutions, are members of the committee.

3. Seminars to Promote Education Beginning from 1997

3.1 Seminars on Basic Education

To stimulate reforms, seven annual seminars have been held in the basic education sector since 1998 and they were attended by administrators, teachers, and education specialists. The first two held in 1998 and 1999, acted as the basis for the education promotion programmes while the 2000 seminar considered the programmes to be implemented under the special four year plan for education. Subsequent seminars have served as a forum to assess achievements and reviewed programmes for the following year. Major areas focused by each seminar on basic education are listed below:

Seminar	Areas Focused
May 1998	<ul style="list-style-type: none">• Review and reform of the primary education curriculum• Introduction of a new assessment system and initiation of a new matriculation examination system• Effective application of the mass media in the teaching learning process• Opening of pre-school classes in basic education schools <p>Upgrading teacher training colleges and teacher training schools to</p>

	<p>education colleges and providing pre-service teacher training programmes</p> <ul style="list-style-type: none"> • Providing in-service classes in the basic education schools • Formation of school families for collaboration between schools in the same area • Expansion of Parent Teacher Association and initiation of the formation of School Board of Trustees • Prescribing Comprehensive Personal Record (CPR) of students
<p>March 1999</p>	<ul style="list-style-type: none"> • Preparation for the formation of education development associations at different levels • Inauguration of postgraduate diploma in teaching • Nurturing of all-round developed students • Provision of access to basic education for overseas Myanmar children • Promotion of union spirit among students • Utilization of a more effective modern technology in the teaching learning process • Designing and implementing the Education calendar to define year round activities to be carried out by all schools simultaneously

May 2000

- Implementation of the Special Four-Year Plan for Education 2000
- Defining the basic education level of overseas Myanmar children attending

international schools

- Appointing those who have received pre-service training as teachers in basic education schools
- Reducing the number of uncertified teachers
- Improving the quality of co-curricular subjects at primary and lower secondary levels
- Forming school counseling and guidance teams in basic education high schools

May 2001

- Implementation of the 30-year long-term education development plan
- Creating an education system for modernization and development of the country
- Intensifying Basic Education for All
- Improving the quality of basic education
- Providing access to pre-vocational education and vocational education at different basic education levels
- Improving access to teaching, learning and communication technology leading towards e-education
- Nurturing all round-developed citizens
- Capacity building for educational management
- Undertaking basic education activities in collaboration with the community
- Enhancing non-formal education activities
- Undertaking programmes to promote formal/non-formal education/quality improvement of learners
- Enhancing education research

April 2002

- Discussion on the implementation of the first five year phase of long-term plan and the programmes implemented in 2002-2003 fiscal year
- Discussion of six papers on comparative study of international education systems relating to:

- Implementation of compulsory education internationally
- Education developments in the new century and the intensification of the use of ICT in schools
- Upgrading teaching training quality
- Improving teaching learning at~ basic education and revising the assessment system
- Enhancing education management

May 2003

- Discussion on the implementation of the second year of first five-year phase of long term plan and the programmes to be implemented in 2003-2004 fiscal year
- Supervision of students to ensure continuation of schooling
- Implementing effective teaching learning at post-primary schools
- Nurturing talented students in the high school level
- Efficient distribution of textbooks
- Implementation of Education for All activities
- Introduction of geography, physics, and chemistry combination at high school
- Linking teaching and evaluation
- Promoting quality of teacher training
- Co-curricular subjects, development subjects and training in school activities
- Effective use of ICT
- Development of an effective and efficient management system
- Production of treated water for schools
- Development of outstanding students in schools
- Standardizing student-teacher ratio

May 2004

- Discussion on the implementation of the second year of the first five-year phase of long term plan and the programmes to be implemented in 2003-2004 fiscal year

- Undertaking teaching and learning in accordance with the development and changes in education
- Effective and efficient inspection of basic education schools and offices
- Ensuring regular attendance of students
- Increasing pre-service programmes and competency development programmes to increase the number of teachers
- Greening of school environs

3.2 Seminars on Higher Education

Since 1997, annual seminars on the higher education sub-sector has been held to initiate reforms. The seminars held between 1997 and 2000 produced the first wave of changes while the latter ones focused on implementation of the education promotion plans. The seminars related to the promotion of higher education held between 1997 and 1999 are important milestones in the annals of the education sector. The seminars had a great impact on the crafting of higher education to satisfy the demand for better qualified human resource to meet the new challenges stemming from the increasing demand for higher education, the emergence of new modalities of learning and the need to be responsive to the requirements for better qualified human resource by a modernizing economy.

A wide array of tertiary education promotion issues including relevancy and responsiveness of existing courses, redesigning of course structure, reform of the assessment system, faculty development, harnessing of ICT in higher education, enhancement of cooperation with foreign institutions, creation of an alternative delivery modality for higher education and the introduction of new programmes to promote human resources development, was addressed.

The seminars held in 2000, 2001, 2002 focused on the formulation, implementation and review of programmes on education development plans and the realization of the education vision: **To create an education system that will generate a learning society capable of facing the challenges of the Knowledge Age** and in accordance with the national motto: **Building a modern developed nation through education**, and act as a major resource in transforming

Myanmar into a peaceful, modern and developed nation. Major areas focused by each seminar on higher education are listed below:

Year	Areas Focused
October 1997	<ul style="list-style-type: none"> • Introduction of a modular credit system • Review of the examination system • Redefining duration of postgraduate courses
March 1998	<ul style="list-style-type: none"> • Review of undergraduate courses including curricula, duration and content • Introduction of multidisciplinary courses and credit system • Examination practices and eligibility for postgraduate studies
May 1998	<ul style="list-style-type: none"> • Review of role of higher education institutions and manpower needs of the nation • Delivery of flexible alternative modes of education • Initiation of Income Generating activities and provision of incentive for the staff • Initiation of Human Resource Development Programmes • Establishment of National Centre for Human Resource Development (NCHRD) and Centres for HRD in various tertiary institutions
March 1999	<ul style="list-style-type: none"> • Review of postgraduate programmes • Upgrading facilities to cater to doctoral courses and research • Introduction of multidisciplinary programmes

	<ul style="list-style-type: none"> • Inclusion of computer courses at undergraduate levels • Introduction of teacher quality upgrading programmes • Review of the distance education system • Utilization of information and communication technology in the higher education sector
April 2000	<ul style="list-style-type: none"> • Equity and quality issues for the two Universities of Distance Education • Issue of Recognition of Prior Learning (PRL) and the creation of a national academic entity for maintaining Education Credit Bank • Implementation of the plans of the Special Four Year Plan relating to promotion of the quality of education: <ul style="list-style-type: none"> – Introduction of ICT in education – Advancement of research – Development of a lifelong learning society, and – Enhancement of international collaborations

April 2001

- Review of achievement in the implementation of the programmes set by the Special Four-Year Plan
- Discussions on the 36 programmes to-be implemented under the Thirty-Year Long-Term Education Development Plan relating to:
 - Development of human resource
 - Utilization of technology
 - Expansion of research
 - Development of a lifelong learning society

- Promotion of the quality of education, and
- Preservation of national identity and national values

April 2002

- Review of achievement in the implementation of the first year of 30-Year Long-Term Education Development Plan and scheduling of programmes to be implemented in the new fiscal year
- Discussion on 21 papers related to:
 - Local and international education issues
 - Developments in the international tertiary education domain regarding distance education, higher education management and teaching of foreign languages
 - Upgrading of the English language proficiency of administrators, faculty and higher education students
 - Enhancing research in the higher education sub-sector with focus on funding sources, training in research methodology, research areas and the undertaking of collaborative research
 - Expanding the programme to nurture gifted students
 - Promoting distance education and learning facilities by expanding and improving undergraduate courses introducing new postgraduate courses, initiating faculty development programmes specifically tailored for those involved in distance education, improving distance education instruction, making more effective use of learning centres and developing a distance education organization in Myanmar that reflects the scope and scale of operation of distance education in the country
 - Introducing the faculty system at higher education institutions in line with international practices
 - Defining the role of higher education institutions in fulfilling community needs, and the type of educational programmes that could be offered using the networks of learning centres, community learning centres, and other means available

- Defining subject combinations offered at high schools and possible choices of Higher Education Institutions and specializations and comparison of international matriculation systems with that of Myanmar to implement programmes on diversification and development of specialization programmes
- Projecting ratio of students, teachers and building facilities until 2007
- Developing the ICT infrastructure and network, and computerization programme for the higher education sub-sector to facilitate teaching, management, and collection of information

May 2003

- Reviewing progress of the implementation of the first year of 30-Year Long-Term Education Development Plan and scheduling of programmes to be implemented in the new fiscal year
- Discussion on 26 papers relating to:
 - Expanding basic and applied research
 - Promoting the teaching of English
 - Enhancing the distance education system, and forming linkages with the conventional system
 - Improving use of IT faculties
 - Introducing faculty system at higher education institutions
 - Facilitating the computerization of the higher education sub-sector
 - Making HRD courses more responsive to local needs
 - Revising the curricula -
 - Improving management, teaching and faculty development using quality platform as measurement

May 2004

- Reviewing progress of implementation of the first year of 30-Year Long-Term Education Development Plan and scheduling of programmes to be implemented in the new fiscal year
- Discussion on 23 papers relating to:
 - Promoting quality of research and researchers and developing researches that contributes to the region in which the institutions are located
 - Revising curriculum of teacher training programmes to include developments in the field of ICT
 - Increasing human resource development programmes that will contribute to regional production and trade
 - Promoting the teaching of English to enhance teaching, learning and management
 - Upgrading the quality of faculty
 - Reviewing the computerization of the higher education sub-sector and programmes to develop the quality of ICT utilization
 - Making effective use of ICT in higher education departments and institutions to enhance teaching, learning and management
 - Enhancing the quality of teaching
 - Introducing values education to nurture good citizens and to uphold Myanmar culture and traditions
 - Initiating other means of evaluation in addition to the matriculation examination conducted on a nationwide basis to enable students to pursue higher education to develop qualified human resource
 - Enhancing faculty welfare

4. Special Four-Year Plan for Education (2000-01 FY to 2003-04)

With the aim of further developing the education sector, and in particular, to strive for the development of highly qualified human resource and to introduce regional human resource

development programmes, the Ministry of Education formulated the Special Four-Year Plan for Education implemented from 2000-2001 FY to 2003-2004 AY. The Special Plan defined 6 programmes to be implemented by the basic education sub-sector and 21 programmes to be implemented by the higher education sub-sector.

The six work programmes outlined in the plan for the basic education sub-sector are:

- To revise and reform the basic education curriculum
- To introduce a new assessment system, to redefine completion of basic education and to restructure the university entrance examination
- To introduce multimedia classrooms to enhance the teaching-learning process
- To upgrade the quality of teacher education
- To support all-round development activities
- To universalize primary education

The successful completion of the work programmes for the basic education in the Special Four-Year Plan has brought about fundamental development in the basic education sector. The achievements in brief are:

- Increase in school enrollment rates
- Major revision of the curriculum of the three levels in basic education with the addition of important components
- Review of the old assessment system that encouraged rote learning and replacement with continuous assessment procedures that promote rational thinking, creativity and problem solving skills in the learners
- Extensive establishment of multimedia classrooms that make use of printed, non-printed, display, electronic, projected media and computer aided instruction
- Upgrading of teacher training institutions and teacher quality

The 21 programmes which produced a wide-ranging agenda for the development of higher education for the Higher Education Sub-sector are:

1. To review and revise the curricula of universities, degree colleges and colleges to be on parity with international standard. (The content of subjects will also be reorganized and multi-disciplinary subjects will be introduced.)
2. To revise the assessment system in line with curriculum changes to conform to international practices
3. To enhance originality, creativity and analytical skills, ability to grasp and utilize modern technology and development of maturity through changes in curricula and teaching method
4. To reduce constraints to produce an education system that will develop and conserve human resource development
5. To develop an education system that will promote lifelong learning and continuing education
6. To seek ways and means to transform distance education universities into open universities
7. To undertake research not only related to academic concerns but also be of relevance to the needs of private enterprises and organizations seeking modern technology and be directly beneficial to the nation
8. To establish collaboration and networking with Southeast Asian and international universities
9. To establish a self-sustained system in the management and financing of universities, degree colleges and colleges
10. To create educational programmes that will fulfil community needs
11. To upgrade science laboratories so that research can be carried out using modern technology and equipment from undergraduate to doctoral levels
12. To establish an education Intranet system
13. To utilize information technology in multimedia resource centres in higher education institutions for teaching and research purposes
14. To utilize information technology in the learning centres of open universities to enhance learning
15. To establish language laboratories in higher education institutions
16. To upgrade the Universities' Central Library and libraries at higher education institutions using information technology so that users will be able to make use of

- library facilities without having to come to the library
17. To establish the necessary structures for the establishment of an open education system
 18. To fulfil the need of higher education institutions for improved facilities
 19. To produce and distribute audio and video teaching and learning materials produced in departmental studio utilizing modern technology and equipment that will suit local conditions and needs
 20. To produce and distribute audio and video learning materials on practicals and lessons based on the curriculum to be utilized in multimedia classrooms of basic education schools
 21. To produce video and audio materials related to individual courses to facilitate Universities of Distance Education students in their study

The 21 programmes focused on five core areas:

- Promotion of the quality of education
- Introduction of ICT in education
- Advancement of research
- Development of a lifelong learning society, and
- Enhancement of international collaborations

Major achievements by the higher education sub-sector due to the successful completion of the four-year plan are:

- Establishment of ICT facilities, namely e-education learning centres, e-education resource centres, computer training centres, multimedia lecture rooms and language labs at all higher education institutions
- Introduction of new curricula at higher education institutions from 2000-01 AY and production of textbooks and course books for undergraduate programmes in line with curriculum revision
- Initiation of new programmes including the doctorate programme
- Introduction of new specializations and multidisciplinary courses at universities, degree colleges and colleges

- Introduction of teaching methodology that promotes critical thinking, and analytical skills
- Development of skills development courses at Human Resource Development Centres of higher education institutions to meet community needs
- Upgrading of library, research and recreation facilities at all higher education institutions
- Increased linkages with regional and international educational institutions and organizations

The successful implementation of the Four-Year Plan for education has led to the renewal of core capabilities and facilities and the extensive applications of ICT in both the basic and higher education sub-sectors.

5. Thirty-Year Long-Term Education Development Plan (2001-02 FY — 2030-31 FY)

The Thirty-Year Long-Term Education Development Plan (2001-02 FY — 2030-31 FY), being implemented in six phases of five-year duration each is now in its third year of implementation. It is the most ambitious of the plans launched by the Ministry of Education. The plan contains 10 programmes for the Basic Education Sub-sector and 36 programmes for the higher education sub-sector.

The ten programmes being implemented in the Basic Education Sub-sector under the Thirty-Year Long-Term Education Development Plan are:

1. Creating an education system for modernization and development of the country
2. Basic Education for All
3. Improving the quality of basic education
4. Providing access to pre-vocational education and vocational education at different basic education levels
5. Improving access to teaching learning and communication technology leading towards e-education
6. Producing all round developed citizens
7. Capacity building for educational management
8. Carrying out basic education activities in collaboration with the community
9. Improving non-formal education activities

10. Improving educational research

The 36 programmes for the higher education component of the long-term plan focus on six areas that will generate qualitative development of higher education and contribute to national development endeavours and preservation of national identity and culture.

The six core areas under focus are:

- Development of human resource
- Utilization of technology
- Expansion of research
- Development of a lifelong learning society
- Promotion of the quality of education and
- Preservation of national identity and national values

The 36 programmes are:

Human Resource Development (2 Programmes)

1. To extend programmes that cater to the demands of the communities by exploiting the disciplines and the excellent academic environment and the respective resources and facilities
2. To develop highly qualified human resources and regional human resource development needed by the state

Utilization of Technology Section (6 Programmes)

3. To be able to use information and communication technology, which is changing and developing with the times, not only as a teaching technology but also as a learning technology
4. To give priority to communication technology and electronic technology, to enhance skills at all levels of undergraduate and postgraduate studies, especially in continuous education programmes
5. To include Microtechnology from the undergraduate level and to give priority to carrying

out research on fields related to it

6. To transform the libraries in higher education institutions into Electronic Information Resource Centres
7. To establish Electronic Resource Centres as Myanmar Electronic Information Network (MEIR_Net)
8. To establish the Myanmar Higher Education Network (MHE_Net) that will link all the higher education institutions with the Internet

Research Section (3 Programmes)

9. To conduct research not only for the advancement of the discipline concerned, but also for businesses, organizations and enterprises that are in need of modern technology, and those that will benefit the nation directly
10. To establish higher education institutions specializing in research and to collaborate in research work with international research centres and organizations
11. To establish a research organization/centre that can carry out full time research on education activities in order to evaluate to what extent the actual outcomes matches the visions, objectives and outcomes of education programmes, to discover and evaluate the weaknesses, if necessary to redefine the visions, objectives and outcomes laid down previously and to add, reduce or change programmes

Lifelong Learning Society Section (9 Programmes)

12. To establish higher education institutions that will unceasingly take responsibility of the education of the region and community
13. To conduct vocational courses in collaboration with basic education schools, factories and work establishments so that a pathway can be created to confer associate Degree and other Degrees
14. For higher education institutions to implement programmes for re-education and continuing adult education
15. For higher education institutions to implement programmes related to learning to learn and continuing to learn opportunities by using contemporary technology and focusing on life

long learning

16. To create opportunities for higher education institutions to deal freely with external work establishments and for learners to be given the opportunity for open entry and re-entry to education
17. For higher education institutions to innovate and introduce teaching programmes that can fulfil community needs
18. To transform the whole work force into a learning force rapidly linking all work establishments with higher education institutions
19. To transform into open education system, to introduce credit bank system and to establish an organization to take charge of these undertakings
20. Aiming at the emergence of an immense learning society in the future, to create an open education system that will provide opportunities regardless of region and for higher education institutions to create an education system that will be able to cope with diversity and the increase in the number of disciplines and varying educational needs

Qualitative Transformation of Education Section (15 Programmes)

21. For the future higher education system to aim at qualitative transformation, to transform breadth of learning to breadth and depth of learning and to promote the abilities to carry out generative synthesis, to be creative and undertake critical evaluation, and visualize new fields of education
22. To create a combination system which serves as a sound basis for cross-disciplinary and interdisciplinary approaches
23. To find ways and means to enable the curriculum, teaching methods and evaluation to give emphasis to the development of learner creativity, analytical skills, ability to utilize modern technology and to construct a system that will enhance maturity
24. For higher education institutions to bring about a sound academic atmosphere and knowledge environment and create the right conditions for the establishment of linkages with international education domain
25. To reduce the rigidity in the distinction between formal education and non-formal and informal education of higher education institutions until it disappears
26. To implement diversification and specialization programmes that will provide the right to

pursue discipline and combination of one's choice

27. To find effective ways to expand the distance education system and transform it into an open university, to expand new teaching programmes, to provide programmes leading to degrees, as well as introduce programmes that will promote skills and to provide the highest and most extensive learning opportunity by utilizing technology
28. To devise programmes that will promote competition on equal terms and cooperation with international distance education systems
29. To create part-time courses at higher education institutions
30. To create education programmes which will overcome the rigidity of traditional education system since it is no longer adequate for higher education institutions to merely provide a fixed body of knowledge
31. To expand the teaching of foreign languages and to give undergraduate the opportunity to learn another foreign language, in addition to English, for communication and effective use in their respective field of study
32. To establish a Higher Education Curriculum Centre and to set up an Education Curriculum Council in order to evaluate whether basic education is in consonance with it or not
33. To form the Academic Evaluation and Assessment Council for the higher education sector
34. To carry out restructuring and reorientation of higher education management system.
35. To carry out changes in the institutional structures of higher education institutions in accordance with the times and to fulfil the need for physical facilities of higher education institutions by setting a basic standard

Preservation of National Identity and National Values Section (1 Programme)

36. No matter how extensive globalization occurs, so that national identity, national values and national well being do not diminish, curricula, new teaching programmes, researches and public educative programmes must be undertaken after careful consideration, with due regard given to this aspect

The third year of the implementation of the long-term education development plan has led to marked accessibility to both basic and higher education. It has brought about noticeable development in the quality of education, the teachers and the learning facilities. It has also

created diversity in the education sector producing new modes of learning and new fields of studies.

6. Promotion of Accessibility, Quality and Diversification in Education

6.1 Promoting Access to Basic Education

In the Basic Education Sub-sector, the number of basic education schools and the number of teachers appointed have been markedly increased including the border and remote areas to promote accessibility which has led to a huge increase in enrolment. The number of schools has been increased from 33,747 in 1987-88 AY to 40,505 in 2004-05 AY. Similarly the number of teachers has grown. In 1987-88 AY there were 173,772 teachers. Now there are 233,149 teachers. The number of students has also markedly increased from over 5.2 million in 1987-88 AY to 7.64 million in 2004-05 AY.

In recent times, due to the government's relentless endeavours in building mutual respect, confidence, and understanding, it has been able to forge, in an unprecedented way, solidarity among the national brethren. With the restoration of peace and stability in the border and remote areas after the return of 17 armed groups, the Ministry of Education has been able to help children from those areas to gain access to formal education. In 1999-00 AY there were 465 schools with an enrolment of 58908 students in the border and remote areas. In 2004-05 AY, the number of schools and students such areas have increased to 790 schools and 116,634 students.

6.2 School Enrolment Promotion Programme

A groundbreaking endeavour of the basic education sub-sector is initiating the school enrolment promotion programme on a national scale to accelerate the realization of universalization of primary education. Since the 1999-00 AY, the last week of May has been prescribed as Enrolment Week and the Whole Township Enrolment Day is observed in every township as a mass movement. Committees for All School Children in School have been

formed at central, state/divisional, township, ward/village tract level and school/village levels. Regional authorities, departmental and educational personnel, well-wishers, parents, local communities, members of the Union Solidarity and Development Association, the Myanmar Maternal and Child Welfare Association, the Myanmar Women Affairs Federation, Auxiliary Fire Brigade, and the Myanmar Red Cross Society actively participate in this national effort.

The movement mobilizes parents to send their children to school and makes arrangements for the provision of classrooms, furniture and teaching aids to the schools involved. It also harnesses the resource of the communities to support needy children with school uniforms, textbooks, stationary and stipend. The mass media such as the TV, radio and newspapers are used to mobilize public participation in the programme. Activities such as raising billboards and mobilization of communities are undertaken widely to create public awareness at the grassroots level. Due to the efforts the school enrolment rate rose from 91% in 1998-99 to 96.56% in 2004-05 AY.

6.3 Creating Gender Parity in Schools

Gender disparity in primary and secondary education is close to being eliminated in Myanmar. In 2004-05 AY, of the primary education enrolment of around 5 million pupils, 50% of the pupils enrolled are girls. In middle schools, the number is 48.9% while in high schools it is 49.7%. At the tertiary level the ratio is very much in favour of girls. 2004-05 AY figures show that the ratio of girls to boys is 60.2%

6.4 Opening of Post-Primary Schools

The second access-related innovation at the basic education level is the establishment of post-primary schools. Under this project initiated in 2001-02 AY, primary schools with the necessary facilities introduce a higher class each year beginning with Grade 6. Therefore, students who have completed primary school education are able to continue their middle school education in the same school. In the 2004-05 academic year, the number of such schools totals 4,774 and nearly 268,000 students are attending such schools.

The introduction of post-primary schools has encouraged students to continue their study at middle schools and has been one of the key factors contributing to the increase in the number of those who continue to study in Grade 6 after completing the primary school cycle which ends with Grade 5.

6.5 Promoting Access of Over-aged Children to Primary Education through Innovative Means

In Myanmar, generally, children who are 5 years old enroll in Grade 1 in the primary level. With the aim of promoting access to primary education for over-aged children, a special programme is being implemented at basic education schools in order to further raise school enrollment and also to ensure that all school going age children are in school. The accelerated programme enables children who are of ages 7+ or 8+ to complete primary education in 3 years and for those who are of age 9+ to complete primary education in two years.

Specially designed prescribed texts and teachers' manuals have been introduced to instruct the over-aged children. The lessons are extracted and taught by summarizing to conform to the time available but this in no way lessens the achievement. The over-aged children are taught together in Grade 1 with regular students. Then they are instructed separately by using the multi-grade teaching method. To promote them to another grade, the Child Centered Approach (CCA) and continuous assessment system are used. Oral questions and answers are utilized for Grade 1 and 2 and chapter end tests are used for Grades 3, 4 and 5. After completion of upper primary education, they will gain access to middle school education.

The following number of over-aged children benefited due to the initiation of this special programme in 2003-04 AY:

Table 3: Number of Over-aged Children Enrolled in Special Programme in 2003-04 AY

Sr. No.	Age	Number of Children
1	7+	23,239
2	8+	18,417
3	9+	9,067
Total		50,723

Source: Department of Education Planning and Training, MOE

The new programme has encouraged more over-aged children to attend school, increased enrolment rate at the primary level, enabled over-aged students to complete primary education after an effective period of learning, promoted access to middle school education and in the long run will reduce the number of adult illiterates.

6.6 Introducing the School Calendar

The implementation of the School Calendar is one of the 9 programmes laid down by the second seminar, Education Promotion Programme Phase II, convened in May 1999. It has stimulated all round development of students through simultaneous participation of students throughout the country in activities charted out in the school calendar.

The activities in the calendar mark days of national significance and important social, religious and education events. Examples of events on the calendar are:

Table 4: Examples of Events on School Calendar

Sr. No.	Month	Example of Activity
	May	School Enrolment Day in the last week of May before the start of the new school year
2	June	New Academic Year Inauguration and Fresher Welcome Ceremony Parent-Teacher-Student Get-together
3	July	School Greening Day on second Sunday in July
4	August	Crafts and Skills Exhibition School Health Week in second week
5	September	Awareness Raising of Education for All
6	October	Paying Homage to Teachers
7	November	Offering of Yellow Robes to Monks
8	December	Student Sports Festival
9	January	Independence Day Celebrations School Family Day Celebrations
10	February	Union Day Celebrations
11	March	School Closing and Certificate Awarding Ceremony

Source: Department of Basic Education No. 1, MOE

Every school also holds other school activities such as sports, essay, poetry, extempore talk and traditional performance arts competitions. Those outstanding in the traditional performing arts are able to participate in competitions held at various levels and many have won awards.

6.7 Promoting the Quality of Basic Education

The quality of basic education is being promoted through curriculum reforms to help individuals realize their full potential and become qualified human resources for the nation. The curricula for primary education was revised and redesigned in 1998 to introduce Life-Skills, Natural Science, Morals and Civics in the lower primary level and Social Study (History, Geography) and Basic Science as core subjects in addition to Myanmar, English and Mathematics.

Table 5: Primary School Curriculum [OMITTED]

The Middle school curricula have also been expanded to include prevocational education.

At the high school level, the curriculum has seen major reforms with the designating of Myanmar language, English and Mathematics as core subjects and free choice of any three electives from among Physics, Chemistry, Biology, Geography, History, Economics and Optional Myanmar forming 8 combinations.

Table 6: Secondary School Curriculum [OMITTED]

Previously high school students studied five subjects (Myanmar, English, Mathematics, Social Science (Geography, History, Economics) and Natural Science (Physics, Chemistry, Biology). The number of combinations was increased to give a wide variety of choices with which students can match their aptitude, special interest and strengths and also to be able to study in depth.

Table 7: Combinations offered at High School [OMITTED]

At the conclusion of high school, students receive a high school completion certificate based on their performance during the tenth standard.

6.8 Introducing Life Skills Education

Among the changes made to the curriculum as part of the education promotion programme is the introduction of Life Skills Education. HIV/AIDS emerged in the early 1990's as a major public health problem. Myanmar health and education officials realized that it had become vital to educate the vulnerable group of primary and secondary schools children about the disease and promote the life and social skills needed to prevent the spread of HIV/AIDS using teachers as health educators. The HIV/AIDS Curriculum Task Force was formed with staff from the Ministry of Education's Department of Education Planning and Training (DEPT), National AIDS project personnel and the Ministry of Health for developing the School-based Healthy Living and HIV/AIDS Prevention Education Programme (SHAPE) in 1993. The project was assisted by UNICEF Myanmar. It took over 3 years to develop the teaching learning materials

for different grades after undergoing several field tests. Target audience was identified as children, age 7-14 (Grade 3 to 10). The project involving 4,000 schools from 30 townships was launched in 1998. The project now covers 122 townships and 14,062 schools with 1,848,110 students. 10,547 school heads and 54,050 teachers have undergone training and it also involved 58,605 parents. SHAPE Plus for out of school young people has also been tried out on 1217 participants. The SHAPE curriculum is the first and foremost programme of its kind to be implemented in Myanmar and in South East Asia. Life skills education has been introduced at schools as part of the national curriculum with the objectives of imparting skills to live in conformity with the environment and to practise appropriate basic life skills for a physically and mentally healthy life and to protect from commonly occur preventable diseases. It deals with the psychosocial competencies such as problem solving, creative thinking, critical thinking, decision making, communication, self awareness, interpersonal skills, empathy, and ability to cope with emotions and stress. As Life Skills is concerned with both physical and mental well being, the SHAPE curriculum has been merged with it. Life Skills is taught using child-centred activities and process based, participatory, interactive group approach.

The Life Skills course is taught 3 times a week at the lower primary level and 2 times a week at the upper primary level. The primary level curriculum includes the following:

Table 8: Primary School Life Skills Curriculum

Sr. No.	Area	No of Units	Percentage
1	Life Skills	23	39.66
2	Healthy living and understanding your body	16	27.59
3	Diseases and drugs	15	25.86
4	Mental health	1	1.72
5	Handicraft	3	5.17
Total		58	100%

Source: Department of Education Planning and Training, MOE

At the lower secondary level Life Skills course is taught once a week and at the upper secondary level 15 periods a year. The secondary school level curriculum includes the following:

Table 9: Secondary School Life Skills Curriculum

Sr. No.	Area	No of Units	Percentage
1	Life Skills	37	44.05
2	Healthy living and understanding your body	23	27.38
3	Diseases and drugs	14	16.67
4	Mental health	4	7.76
5	Environmental education	6	7.14
	Total	84	100%

Source: Department of Education Planning and Training, MOE

Life Skills was successfully implemented as the content was relevant and appropriate in terms of student age, and the context in which the materials were to be taught, the number of teachers available, especially in rural schools and the availability of teaching aids were given careful consideration. The introduction of Life Skills in schools has contributed to positive change in both attitude and behaviours with regard to prevention of HIV/AIDS, STI, smoking, drug abuse, sanitation and nutrition practices, personal hygiene, decision making and social skills among students.

6.9 Introducing New Assessment Procedures

New assessment procedures for academic achievement in basic education have been introduced in place of end of term and end of year examinations. The new system has been designed not only to assess academic progress but also contribute to social, intellectual, maturity and physical development of students.

In Grade 1 and Grade 2 no tests of any sort are administered to students and this has resulted in significant reduction of absenteeism and early drop-outs. For higher level grades, in place of end of term and end of year examinations, regular chapter-end tests are conducted. This significantly lightens students' burden of studying for examination purposes and has led to a student-centred and learning-oriented classroom situation. Timely remedial teaching can also

be conducted based on the students' performance in the regular tests. Promotion of a student is not only based on the results of chapter-end tests but also on the marks obtained in the Comprehensive Personal Record (CPR) which records student participation in the activities listed.

The Comprehensive Personal Record for the primary level contains the following components:

1. Having 75% school attendance
2. Sitting regularly the chapter-end tests
3. Abiding by school rules and regulations and not indulging in social crimes
4. Fulfilling obligations to school, teachers, parents and the community and taking care of younger students
5. Growing trees, plants and making the school environ verdant and green
6. Giving assistance in parent's livelihood
7. Participation in sports and physical activities
8. Participating in aesthetic education such as involvement in literary activities, music, singing, dancing and painting
9. Keeping oneself neat and tidy

Components of middle school and high school level Comprehensive Personal Records include the following in addition to those set for the primary school level.

1. Participating in the development tasks of the local community and the State
2. Offering voluntary service for community work
3. Participating in the activities of teams, clubs and associations of the school and social activities such as the Red Cross, etc.

The components are divided into six areas and each area is allocated marks, the total being 100 marks. Students are given a total marks of 100 for each subject in the chapter-end test to measure academic progress. To be promoted to the next level, students must obtain at least 40% in both academic and school activities.

6.10 Expanding the Use of ICT in Basic Education

The Ministry of Education has set itself the goal that every child leaving school should be familiar with the computer and scientifically literate. The government is strongly encouraging the use of ICT in education and has collaborated with the private sector and local communities and established multimedia classrooms and computer laboratories in basic education schools. Specially designed software for basic education has been made available. Internet connection is now available to 100 basic education schools and more are in the pipeline. The harnessing of ICT in education in Myanmar will have a great impact on the provision of quality education to every part of the country and will lead to the development of better-qualified human resource in the country.

Table 10: Type and Number of ICT Facilities Provided to Schools in 2004-05 AY

Facility	No. of Schools
Schools equipped with multimedia classrooms	1,156
Schools equipped with 3 platforms —computer, video & audio	439
Schools equipped with 2 platforms — video & audio	1,107
Schools equipped with 1 platform — audio	17,072
Total	19,774

Source: Department of Basic Education No.1, MOE

6.11 Provision of Internet Access to 100 Basic Education Schools

As the first phase, 100 basic education schools all over Myanmar have been provided access to the Internet using the iPSTAR satellite communication system. With the provision of Internet access, Myanmar schools have entered a new era of accessibility to the latest developments in the world.

e-Education programmes have also been initiated for basic education. They include counseling programmes for Grade 9 students and parents on choice of subject combinations from among the eight at high schools, orientation programme on the matriculation examination, and c-Summer English Programme for students waiting for their matriculation examination results. c-Learning has also been utilized for teacher upgrading programmes. A refresher course on English Language Teaching Methodology for secondary school teachers of English has also been conducted in the form of e-learning. An online instructor course for secondary school teachers on responsibilities and rights of citizens, particularly women, is also being conducted by the Myanmar Women’s Affairs Federation using the network of learning centres.

6.12 Enhancing Teacher Quality of Basic Education Schools

Nurturing teachers and upgrading the quality of basic education teachers is one of the main

tasks of the education promotion programme in Myanmar. The Ministry of Education is employing innovative means to get the required number of qualified teachers. Teacher training in basic education sub-sector is provided using a two-pronged approach — pre-service teacher training programmes and in-service teacher training programmes.

6.12.1 Pre-service Teacher Training Programmes

The Pre-service Teacher Training Programme has been introduced to expand the pool of qualified teachers and to produce an adequate supply of teachers for the schools under the Ministry of Education. To provide more effective pre-service teacher training programmes, teacher training institutions have been upgraded and new programmes introduced to meet the changing needs of schools.

In 1998-99 AY, teacher training colleges and teacher training schools were upgraded to education colleges and pre-service teacher training programme was introduced at these Education Colleges. The 20 education colleges conduct two types of course—the one-year Primary Teacher Training Course and the two-year Secondary Teacher Training Course. The one-year Primary Teacher Training Course confers the Certificate in Education and trainees who have completed the course are eligible to be appointed as primary school teachers. The two-year Secondary Teacher Training Course confers the Diploma in Teacher Education and trainees who have completed the course are eligible to work as lower secondary school teachers.

Yangon Institute of Education and Sagaing Institute of Education conduct pre-service BEd Degree programme which is open to those who have completed two years of training at education colleges and are qualified to attend the course. Matriculates may also join the Direct Intake Pre-service BEd programme. The duration of the course is four years. Graduates from these courses are appointed as upper secondary teachers.

The Postgraduate Diploma in Teaching (PGDT) Programme and the Postgraduate Diploma in Multimedia Arts (Education) (PGDMA) Programme were initiated in 1999-00 AY and are

conducted by the Institutes of Education to produce more qualified teachers. Both programmes accept pre-service and in-service trainees. The PGDMA programme has been introduced to cater to the needs of schools for teachers skilled in ICT to manage multimedia classrooms. The final consolidation component of this course focuses on Information and Communication Technology and pedagogy related to it.

After finishing the PGDT course, trainees receive appointment as lower secondary teachers while PGDMA graduates are appointed as lower secondary teachers in charge of multimedia classrooms.

Yangon Institute of Education has initiated another programme to increase the number of qualified teachers. The programme known as the Certificate in Educational Technology (CET) course provides pre-service teacher education to holders of Master's degrees from various higher education institutions who are interested in entering the teaching profession. The course produces qualified teachers who are competent in instructional technology.

6.12.2 In-service Teacher Training Programmes

In-service teacher training programmes for different levels of different education teachers have also been introduced. The one-year distance learning through Correspondence Course is conducted for uncertified 10,000 primary and 15,000 lower secondary teachers a year. Face-to-face intensive courses are conducted during holidays and summer vacation and the credit system is employed for assessment. Education College-based Teacher Training Course is another form of training conducted for uncertified teachers. Another form of training offered by the colleges is Township-based Primary School Teacher Training One-Year Course in collaboration with Township Education Officers. The training is conducted during weekends, and during school vacation in October and December.

In addition, Yangon Institute of Education and Sagaing Institute of Education conduct a Two-Year Distance Learning BEd Correspondence degree course for in-service upper secondary teachers. After completion of the course, trainees are awarded the BEd degree. Qualified BEd degree holders are permitted to continue to study for their Master of Education (MEd) Course.

The Doctor of Philosophy (PhD) Course was introduced at Yangon Institute of Education in 2000-2001 AY to enable outstanding MEd degree holders to pursue advanced studies.

The multifaceted approach being used for the nurturing of teachers together with the enhancement of teacher education through regular review and revision of the curricula of teacher training institutions to meet current and future needs and the upgraded ICT facilities will boost the number of qualified teachers in the country and contribute to the raising of the quality of education.

6.13 Expansion of Non-formal Education

Following the Jomtien World Conference on Education for All, Myanmar set out its own National Programme of Action for EFA. The EFA Central Coordinating Committee has been established and the executive arm of the Central Coordinating Committee is the EFA Executive Committee whose task is to supervise and monitor EFA projects.

Under the executive committee's guidance some township and village NEF Committees have launched learning circles. Due to the strong commitment of the government and the concerted effort of the personnel concerned the literacy rate has increased to 93.3 % in 2004. The activities were carried out by local voluntary teachers using basic learning materials produced by Myanmar Education Research Bureau — the focal NEF centre in Myanmar. The programme covers Kayin State, Mon State, Rakhine State, Mandalay Division, Ayeyarwady Division, Magway Division, Bago Division (East and West), Tanintharyi Division, and Sagaing Division. Special 3 R programmes have been organized in border areas.

750 Community Learning Centres have also been established in 2003-04 FY and they offer early childhood care and education, basic literacy programmes, income generating programmes and non-formal primary education.

In March 2000, the Myanmar Literary Resource Centre (MLRC) was established in the compound of Myanmar Education Research Bureau with contribution from the Japanese Grant Assistance for Grassroots Project, the ACCU and the Myanmar Government. MLRC is part of the network of thirteen Literary Resource Centers in Asia and the Pacific. One of the functions of MLRC is the training of NEF personnel at various levels by conducting training workshops.

Education for All programme is being expanded at township levels. The Basic Education Departments are participating in the promotion of the- following activities:

- continuing with the implementation of basic literacy programme in the remaining townships in accordance with EFA and NFE plan;
- implementing continuously income generation and life skills activities in townships that have achieved literacy;
- participating in non-formal education programmes of other departments and organizations;
- co-operating with international agencies with the approval of the ministries concerned.

It is to be noted that literacy and life skills are being reinforced with income generating skills and neo-literates are being given access to reading materials at the community learning centres established all over Myanmar.

7. Promotion of Accessibility, Quality and Diversity in Higher Education

The Higher Education Sub-sector has experienced a tremendous expansion since 1988. The successful implementation of the Special Four-Year Education Plan initiated in 2000, and the third year of the implementation of the Long-Term Education Development Plan have led to the promotion of accessibility to higher education, upgrading of the quality of education, and increase in diversity.

7.1 Ensuring Accessibility through Quantitative Expansion

Myanmar, which is aiming for equitable development of all its regions, has divided the country into 24 development zones, so that no area may be left undeveloped. With the expansion in the number of higher education institutions from 32 in 1988 to 156 in 2004, each of the 24 development zone now possesses at least one arts and science university, one degree conferring technological institute and one computer science institute.

Of the 156 higher education institutions, 64 are under the supervision of the Ministry of Education. The type and variety of tertiary institutions has also increased. Before 1988, the majority of tertiary level institutions offered only arts and science disciplines and there were only 9 types of institutions. Now there are 33 different types under 13 different ministries ranging from culture and traditional medicine to aerospace and maritime.

7.2 Promoting the Quality of Higher Education

Higher education is being promoted qualitative transformation. The long-term education development plan aspires to transform breadth of learning into breadth and depth of learning. While promoting generative synthesis, it simultaneously intends to stimulate creativity, initiative and a keen desire to discover in students. To imbue these qualities in higher education students, all disciplines have undergone thorough renewal. New assessment techniques that test depth and breadth of knowledge, creativity and analytical thinking have replaced the old modes of testing that encouraged rote learning and regurgitation of facts. Moreover, to provide students with an extensive choice, all disciplines have introduced the system of offering foundation courses, core courses and electives since December 2002.

The plan also seeks to boost the number of multi-disciplinary courses being offered at higher education institutions with the belief that integrating knowledge from different programmes train students to think beyond the confines of a single discipline and inculcate in them intellectual breadth and depth.

At the undergraduate level too, higher education institutions have introduced a wide spectrum of multi-disciplinary courses, to engage students in greater breadth of learning from a very early level. Another important task of the long-term plan being implemented is the change from department based system to faculty system. The programme was presented at the 2002 higher education seminar and will be implemented stage by stage. The move will greatly facilitate in furthering the use of cross-disciplinary and interdisciplinary approaches at higher education institutions.

The first year of the implementation of Thirty-Year Long-Term Education Development Plan

has seen noteworthy enhancements of the quality of programmes being offered. The number and type of programmes have significantly increased. ICT has gained a key role in the delivery of programmes and management, and faculty and staff development is being intensified. Moreover, higher education institutions are also trying to expand the linkage among the alternative forms of education programmes available.

7.2.1 Qualitative Developments in the Higher Education Sub-sector

The 64 higher education institutions under the Ministry of Education has expanded enormously the number of courses offered to promote a wider choice for students as well as to introduce courses that are more attuned to the needs of the times. Higher education institutions are also focusing on ways, to contribute to regional development by offering courses that fulfil community needs. Apart from regular undergraduate and postgraduate programmes the institutions also offer distance and human resource development programmes. The following are the types and number of programmes offered by higher education institutions under the Ministry of Education.

Table 11: Types and Number of programmes offered by higher education institutions under the Ministry of Education

Sr. No.	Type of Programme	No. of Courses
1	First degree	50
2	Diploma	22
3	Masters	41
4	M.Res	24
5	PhD	20
6	Human Resource Development Programme	169
Total		326

Source: Department of Higher Education (Lower Myanmar), MOE

7.2.2 Developing Learner Maturity, Creativity, Analytical Skills, and Ability to Utilize Modern Technology

A significant aim of the education development plans is to introduce curriculum, teaching methods and evaluation system that give emphasis to the development of learner maturity and creativity, analytical skills, and ability to utilize modern technology. To promote these high order skills in students, higher education institutions formed task forces to introduce changes in teaching methodology. Learner-centred approaches, such as problem-based learning, project-based learning and fieldwork were incorporated into the learning experience of higher education students. This enhances practical and interpersonal skills and helps students to become more active learners who can synthesize practical with theoretical experience and employ knowledge learnt in solving real life issues. In addition, computer training centres were established at all higher education institutions and computer courses introduced at all levels as a compulsory component to promote computer skills among tertiary students to enable them to harness ICT in their learning. Moreover, to facilitate effective instruction, multimedia lecture rooms were established at all higher education institutions to promote the use of multimedia presentations in teaching. In order to encourage self-directed learning, e-resource centres were introduced so that both faculty and students could use these centres to augment their lectures with self-access multimedia learning materials.

7.2.3 Revising Curricula and Introducing New Learning Materials

In accordance with the aim of the special four-year plan to upgrade the quality of higher education programmes to ensure that students acquire knowledge, skills and technology that are of relevance to their future needs, professors and heads of academic departments of higher education institutions under the guidance of their respective board of studies reviewed the curricula of both undergraduate and postgraduate courses. Textbooks, course books and item banks were prepared in line with the revised curriculum and introduced in July 2000.

7.2.4 Instituting the Credit System

The assessment system at higher education institutions was revised to be in tandem with the modular form of courses. The credit system was introduced at the graduate level beginning from the 1999-00 AY and at the undergraduate level from the First Year beginning from the 2000-01 AY. The credit system allows students to progress at his/her own rate according to ability and facilitate Myanmar students transfer to foreign institutions on student exchange programmes. Questions that demand critical thinking and intelligent application are being utilized moving away from factual recall.

7.2.5 Introducing Multi-disciplinary Courses to Develop Cross Disciplinary Thinking

A significant development in higher education is the introduction of the cross disciplinary approach to learning as part of the education promotion plan. Multi-disciplinary programmes were initiated at both undergraduate and graduate levels. This initiative provides students with a wide intellectual platform and trains them to think across disciplines and inculcate them with intellectual breadth.

7.2.6 Launching New Programmes

New graduate programmes such as the Master of Public Administration (MPA) programme was initiated by the Institutes of Economics (IOEs) to cater to the demand for advanced management studies. The IOEs also introduced the Bachelor of Business Administration (BBA) and Bachelor of Accounting (BAct) programmes to strengthen business and management education in the country.

Another new programme the Master of Research (MRes) was initiated at all the universities in 1998. This one-year pure research programme which is open to qualified Master's degree holders was introduced to promote research capabilities at higher education institutions. An

added incentive was that those who received this degree would gain direct access to the doctorate programme without having to sit the entrance examination.

7.2.7 Initiating Doctorate Programmes to Nurture Specialists

To generate an indigenous supply of the requisite specialists in the country, Yangon University initiated doctorate courses in the 1994-95 AY, Mandalay University and Yangon Institute of Economics in 1998-99 AY and Yangon Institute of Education in 2001-02 AY.

Due to this endeavour, 207 candidates from higher education institutions under the Ministry of Education have received their doctorate degrees within the country and another 1335 students are enrolled as doctorate candidates at the four universities. Distinguished professors from reputable foreign universities are invited to act as external examiners or referees to the doctorate candidates in order to promote quality assurance.

In addition, a new form of PhD programme that would enable professors, associate professors and senior lecturers over 45 years of age and with at least 10 years teaching experience to work for their PhD degree through submission of dissertations based on research carried out at their respective higher education institutions was initiated in 2002-03 AY. This programme will enable senior faculty to upgrade their knowledge without causing interruption to their work. Another type of PhD for qualified retired faculty and officials who are working as part-time faculty or advisors at higher education institutions under the Ministry of education has also been launched. The senior academicians can earn their doctorate degree by submitting a dissertation.

7.2.8 Catering to the Needs of Local Communities

Myanmar higher education institutions are reinforcing their role as a centre for creating and disseminating knowledge in the local community. They are defining the services, skills and knowledge that could provide rural areas and the community in which they are located and strengthen linkages with local communities rural communities and contribute to their development. They have been able to harness technology to act as a driving force in the

delivery of knowledge and skills and within a short span of five years. They also carry out research on local resources and identify educational programmes they can offer using the networks of learning centres and community learning centres and other means available. Community-based human resource development is being activated in order to buttress development of the local residents' lifelong learning and promote the growth of local industries.

7.2.9 Initiating e-Education in Myanmar

As an endeavour to enhance learning opportunities that transcend the limitations of place and time, e-Education was launched in Myanmar on 1 January 2001. By harnessing information and communication technologies, learning opportunities are being widened for citizens wherever they may be located in the country, regardless of age, sex, experience and educational qualifications thereby facilitating Myanmar to become a learning society able to face the challenges posed by the Knowledge Age.

7.2.9.1 Objectives of e-Education

The objectives of initiating e-Education in Myanmar are outlined below:

1. To create an academic environment that is endowed with dynamic knowledge and utilizing contemporary technology
2. To realize the transformation of the working force into a learning force
3. To transform Myanmar into a knowledge dominated society
4. To strive for Myanmar society to become a lifelong learning society
5. To raise Myanmar education to international standard

7.2.9.2 e-Education and Education Development Plans

The vision of the long-term plan regarding the utilization of technology in education is:

To create an academic environment that is endowed with dynamic knowledge and utilizing the technology that will emerge with the times. Of the 36 programmes in the long-

term plan, the following 6 programmes are related to the utilization of technology:

- 1. To be able to use information and communication technology, which is changing and developing with the times, not only as a teaching technology but also as a learning technology**
- 2. To give priority to communication technology and electronic technology, and to enhance skills at all levels of undergraduate and postgraduate studies, especially in continuing education programmes**
3. To include microtechnology from the undergraduate level and to give priority to carrying out research on related fields
- 4. To transform higher education institution libraries into electronic information resource centres**
- 5. To establish Electronic Resource Centres as Myanmar Electronic Information Network (MEIR_Net)**
6. To establish the Myanmar Higher Education Network (MHE_Net) WAN that will link all the higher education institutions with the Internet

7.2.9.3 Creation of the ICT Infrastructure that Facilitates e-Education

In order to harness ICT to improve the quality of higher education programmes the following facilities have been established for e-education:

1. ICT based facilities such as computer training centres, multimedia lecture rooms and classrooms
2. Electronic Data Broadcasting System and 619 learning centres to form the educational network
3. VSAT System for Ministry of Education administration intranet and extension using fibre optic network system for linkage among departments and higher education institutions
4. Last Mile Radio Link at Department of Higher Education (Lower Myanmar) in addition to the existing VSAT connection
5. Wireless link video conferencing at 5 sites
6. iPSTAR system at 20 education colleges under the Department of Education Planning and Training

7. Internet access for 100 high schools
8. Local Area Network of Department of Higher Education (Lower Myanmar) and universities and degree colleges
9. Initiating Computer Departments at universities and colleges

7.2.9.4 Establishment of ICT-based Facilities

As part of the Special Four-Year Plan for Education, the ICT infrastructure consisting of e-learning centres, computer training centres, e-resource centres to aid in the application of ICT in teaching and learning has been established in all the 64 higher education institutions under the Ministry of Education. In particular, the setting up of computer centres in higher education institutions has enabled the teaching of computing as a compulsory subject and the enhancing of ICT skills of students. The long-term plan aims to consolidate on the gains made by the four-year plan.

Table 12: List of Centres and Facilities Established in 64 Higher Education Institutions under the Ministry of Education

Sr. No.	Name of Centre	No. of Centres
1	e-Learning Centre	51
2	e-Resource Centre	49
3	Computer Training Centre	143
4	Multimedia Lecture Room	60
5	Conference Room	50
6	Language Lab	93

Source: Department of Higher Education (Lower Myanmar), MOE

7.2.9.5 Utilization of Electronic Data Broadcasting System for the Education Network

The Ministry of Education launched 203 e-Education learning centres that utilize Satellite Data Broadcasting System in collaboration with the Ministry of Information in fiscal year 2000-01 to improve access to technology-enabling distance modalities, open learning and other flexible systems to facilitate life-long education opportunities. The number of learning centres was

increased step by step as shown in the following table. [OMITTED]

Table 043: Number of Learning Centres Established between- Fiscal Years 2000-01 to

The two Universities of Distance Education utilize the e-Education learning centres for students to follow lectures transmitted via the Yangon University of Distance Education studio using the Satellite Data Broadcasting System. The centres also act as reference and study facilities where distance education students are given opportunity to consult their teachers.

Three studios for transmission to learning centres — the Video Studio of Myanmar Education Research Department, the GlobeCaster Studio of Yangon University of Distance Education, and the Audio Studio of Yangon University of Distance Education have been built for the production and transmission of learning materials.

7.2.9.6 Introduction of VSAT System

Discs known as Very Small Aperture Terminal (VSAT) are used in satellite communication system. The VSAT links the computer to the satellite. A computer network based on the VSAT System can be established and this network is utilized to relay not only printed but also audio-visual information. The network can be used in both interactive teaching and video conferencing.

The VSAT Network provides the following services:

1. Interactive classes, joint classes and seminars
2. Study groups, study meetings, and administrative meetings
3. Symposiums and conferences

The computer intranet, utilizing the VSAT System was established at the Ministry of Education in October 2001.

The first stage involved the establishment of the intranet system with the use of forty VSAT Systems installed at higher education institutions, departments, and the Office of the Minister, the Ministry of Education. Within the intranet system of the Ministry of Education, more institutions and departments have been linked with LAN, making use of Fibre Optic Cable. In fiscal year 2002-03 four more institutions, Kyaukse University, Maubin University, Panglong

University and Bahrno Degree College were provided with VSAT Systems. In fiscal year 2003-04 Myingyan and Moehnyin Degree Colleges were equipped with VSATs. All higher education institutions are now linked by the VSAT System.

Fibre optic cable has been used to extend the VSAT network to the following 13 sites located in Yangon in lower Myanmar and Mandalay in upper Myanmar:

The establishment of the VSAT System has made it possible to make available Internet and e-mail services to departments and higher education institutions under the Ministry of Education, facilitating linkages with institutions within the country as well as with international education networks. Provision of access to the Internet will have a major impact on researchers and faculty at higher education institutions who will now be able to gain information from anywhere anytime in the world and further improve the quality of their research and teaching as well as make their findings known to the world.

The installation of the VSAT at higher education institutions and Higher Education Departments, has enabled the one-way Satellite Data Broadcasting System previously installed at e-Education Learning Centres to be linked with the Data Broadcasting System making it possible for the upgrading of the one-way system into an interactive system.

7.2.9.7 Establishment of Wireless Link Video Conferencing System

The Wireless Link Video Conferencing System involves the use of multipoint wireless network system and video conferencing camera. The system enables officials of the Ministry of Education, the Departments of Education (Lower and Upper Myanmar), and higher education institutions to hold conferencing interacting on a visual as well as audio basis from their respective venues and offices. In addition, the integrating of point to multipoint wireless network with the already established Satellite Data Broadcasting Network, allows conferencing between the offices and institutions mentioned above to be transmitted to the learning centres thereby opening a new channel for knowledge dissemination.

As a first stage, videoconferencing facilities have been provided to the following locations:

1. Minister's Office, Ministry of Education, Yangon
2. Department of Higher Education (Lower Myanmar)
3. Department of Higher Education (Upper Myanmar)
4. Myanmar Education Research Bureau (studio)
5. Yangon University of Distance Education (studio)

7.2.9.8 Installing the iPSTAR System

The iPSTAR satellite communication system has been installed at the 20 education colleges under the Department of Education Planning and Training to facilitate teaching and administration. The colleges also have access to the Internet via the VSAT System. Hence the use of iPSTAR, has enabled information to be downloaded from servers of education colleges, the 10 departments under the Ministry of Education and the Internet thereby facilitating the expansion of e-education programmes.

7.2.9.9 Provision of Internet Access to 100 Basic Education Schools

As the first phase, 100 basic education schools all over Myanmar have been provided access to the Internet using the iPSTAR satellite communication system. With the provision of Internet access, Myanmar schools have entered a new era of accessibility to the latest developments in the world.

7.2.9.10 Initiating Computer Departments

To facilitate the use of ICT in teaching, learning and management Computer Departments have been included in the organization structure of 21 universities and degree colleges as in the structure of the 2 Departments of Higher Education, 4 Departments of Basic Education, the Universities Historical Research Department and the Myanmar Education Research Department.

7.2.9.11 e-Education Initiatives in Higher Education

Transformation of the learning environment of higher education sub-sector into a technologically pervasive environment to be in tandem with advances in ICT began in the FY 2000-01 with the initiation of the Special Four-Year Plan.

Under the plan, Computer Training Centres, e-Education Resource Centres, e-Education Learning Centres, Audio Type Language Labs, Computer-Aided Language Labs, Multimedia Lecture Rooms and Conference Rooms were established at all the higher education institutions under the Ministry of Education. The establishment of such centres with ICT facilities has brought about fundamental transformations to higher education institutions enabling learners to use ICT in their learning and the faculty to provide improved instruction to their students.

At the higher education level, the two distance education universities, Yangon University of Distance Education and Mandalay University of Distance Education, provide part of their instruction at the 619 learning centres utilizing e-learning.

Yangon Institute of Economics offers the Diploma in Education Management, which is a one-year two-semester programme to enhance management skills of senior faculty and administrators. Part of the programme is spent at the respective home institutions and instruction is provided through e-learning. The English Department of Yangon University has also launched the Young Faculty Development Programme to upgrade the teaching skills of young faculty of English Departments of higher education institutions located all over Myanmar.

The innovative programme is based on materials available on the Internet and conducted using the Satellite Data Broadcasting System and viewable at the learning centres of higher education institutions. The Diploma in Library and Information Management Programme initiated with the aim of upgrading the quality of the staff of libraries of higher education institutions utilizes computer aided Web-based e-Exam to test course participants. Planned to be introduced in December this year is another e-based programme - the MSc in Computer Science that utilizes

e-learning.

The Ministry of Education is increasingly using e-learning to provide short term training and educative programmes relevant to a wide audience as it has proved to be a cost effective means of disseminating knowledge and skills. The Ministry of Education has initiated online training programmes at learning centres using the Satellite Data Broadcasting System. The online Non-formal Education training programme held in November 2003 was in the form of lectures, demonstrations, quizzes, plays and teleconferencing. Over 7,200 persons participated in the training programme. The online training programme on education management for education officials and school principals was held in April 2004 at learning centres all over Myanmar with over 10700 participants. The introduction of the online training programmes has enabled the reduction of training cost and at the same time has made it possible to increase the number of trainees.

As a result of the establishment of the ICT infrastructure, more than 1.25 million students in the basic education sub-sector, nearly 10000 teacher trainees at education colleges and about 700000 students in the higher education sub-sector are being provided knowledge and skills including regular academic programmes through e-learning centres throughout Myanmar.

All the higher education institutions under the Ministry of Education have now received access to the Internet. In addition, local communities are enjoying the facilities to gain access to knowledge and educative programmes.

7.2.9.12 Nurturing Teachers and Technicians for e-Education

Since 1999, the Ministry of Education has been giving careful consideration to the nurturing of teachers for e-instruction. Two training programmes, Postgraduate Diploma in Teaching (PGDT) and Postgraduate Diploma in Multimedia Arts (PGDMA) have been initiated at the two Institutes of Education. The courses focus on the development of ICT knowledge and skills of basic education teachers for application of ICT in their teaching and the management of the multimedia classrooms in schools. The curriculum for the two courses have been revised to

make them more in tune with current and future needs. Similarly at the higher education level, courses such as e-Government Course, DHEs Computerization Course, Photo database Course, MYAN1_EDU Portal Application Course, the MSc Computer Science Course for Faculty and Administrative Staff, the Post Graduate Diploma in Computer Science Course, the Diploma in Software Engineering Course, the Diploma in Hardware Engineering Course, and the Diploma in Networking Engineering Course were launched with the aim of building a pool of ICT specialists to develop, teach and manage ICT and e-education programmes at institutions and departments under the ministry. Technicians, faculty and high school teachers have also been provided with training in the operation and maintenance of ICT appliances, production of ICT-based learning materials and the administration of learning centres.

7.2.9.13 Coverage of the MOE Wide Area Network

The Wide Area Network (WAN) and Electronic Data Broadcasting System under the Ministry of Education electronically connect all the 64 institutions of higher education, all the 20 Education Colleges, 100 basic education secondary schools, all the 10 departments under the Ministry of Education. Some higher education institutions also have access to wireless video conferencing facilities.

Since 2000-01 fiscal year, the Government has provided 5007.556 million Kyats in local currency and US\$ 2.531 million for e-education programmes. In addition to the budget provided by the Government, local communities, NGOs and School Board of Trustees have contributed hardware and other facilities for the basic education sub-sector, amounting to 9 billion Kyats in local currency. -

7.2.9.14 Challenges in implementing e-Education

The Ministry of Education has been focusing attention on the application of ICT in teaching and learning in the education sector for the past four years. During this period, it has been able to establish the basic ICT infrastructure and build a network for its effective use. The ministry

has also been able to expand the use of ICT not only in enhancing teaching and learning but also in management.

As the use of ICT spreads further in the sector and e-education gains more importance, three key areas need to be focused on. The first concerns hardware maintenance with the number of computers and ICT increasing day by day in schools and higher education institutions. The second area of concern is content development. With the expansion in the number of courses, designing, developing and delivering of web-based course and programmes will need to be given careful attention. The third area that will need to be looked into is the matter of providing training for trainers. To build the capacity of training programmes, more trainers will need to be nurtured.

Table 14: List of 619 e-Education Learning Centres in 2003-04 Fiscal Year [OMITTED]

7.2.10 Creating a Strong Research Environment

The education plans seek to build research capabilities of higher education institutions to promote basic research to generate new knowledge; -applied research to boost research not only for the advancement of the discipline concerned, but also for enterprises, organizations and industries that are in need of modern technology, and those that will have a direct impact on the development of the nation. Research facilities have been upgraded and new equipment and references provided and funding for research has been enhanced. The emerging trend among Myanmar higher education institutions is to provide research services to government departments and private enterprises or collaborate with them in conducting research. A number of these researches have economic value. The formation of research links with industry will benefit higher education institutions in the form of financial contributions, facility and staff development and application of the results of research.

For the long-term development of research, the long-term plan aims to establish higher education institutions specializing in research and enhance collaborative research with international research centres and organizations. In addition, a research organization/centre that focuses on research on education activities will be established under the plan in order to

evaluate to what extent the actual outcomes match the visions, objectives and end results of education programmes, to investigate and evaluate the weaknesses, if necessary to redefine the visions, objectives and outcomes laid down previously and to add, reduce or change programmes.

7.2.10.1 Expanding Activities of Research Centres

Research Centres previously established at higher education institutions are being upgraded and new centres instituted under the long-term education development plan in order to promote research and scholarship and to provide research services to industry and enterprises in the region in which the universities are established and contribute to their development. Activities of some of the main research centres located at major universities in Myanmar are highlighted below.

7.2.10.1.1 The Universities Research Centre (URC)

The Universities Research Centre (URC) was founded in 1985. It assists and fosters research activities in higher education institutions provides research facilities and guidance to students and faculty under the Ministry of Education and other ministries. It also provides services to private enterprises and NGOs.

7.2.10.1.2 Asia Research Centre, Yangon University

The Asia Research Centre (ARC) was opened at Universities' Research Centre, Yangon University (YU) on 9 August 2002. The primary financier of ARC, YU is the Korea Foundation for Advanced Studies (KFAS) that signed a Memorandum of Understanding with Yangon University on 9 April 2002. The mission of ARC, YU is to assist in the preparation of Myanmar intellectual advancement and to contribute to the development of the frontiers of national science development by fostering scientific activities and their applications to industry.

7.2.10.1.3 Microbiology Research Centre, Myitkyina University

A microbiology laboratory has been set up in Myitkyina University located in Kachin State, northern Myanmar under the supervision of the Botany Department. Research in the centre focuses on the fauna and flora of the region such as seed culture of perennial orchids in Kachin State, meristem culture of the shoot tip of pineapples, medicinal plants and rare species of orchids from Kachin State.

7.2.10.1.4 Set-Se Aquaculture Research Centre, Mawlamyine University

The Aquaculture Research Centre located in Set-Se, a coastal town in Mon State, southern Myanmar which was established by the Marine Biology Department of Mawlamyine University is the largest research centre on aquatic life under the Department of Higher Education (Lower Myanmar). Its research activities concern fresh water and salt water prawn culture, other aquatic life culture and the cultivation of seaweeds. The centre also carries out fresh water and salt water prawn culture on a commercial basis in collaboration with the private sector. The centre aims to produce 24 million prawn post lava annually.

7.2.10.1.5 The Aquaculture Research Centre, Yangon University

The Aquaculture Research Centre of the Zoology Department conducts research on the breeding of various species of fish both local and foreign, for commercial purposes. The centre was upgraded to extend its scope to butterfly farming, ornamental fish culture, and the culture of live food for the cultured fish. It also aims to collaborate with both government organizations as well as the private sector specializing in aquaculture.

7.2.10.1.6 New Century Biotechnology Development Centre

The New Century Biotechnology Development Centre located opposite the campus of Yangon University was inaugurated on May 2003. The centre aims to provide knowledge and awareness of biotechnology to the public, lead the way to public-private partnership ventures at

higher education institutions for the development of research activities, establish a conservatory and a nursery for the ex-situ conservation of rare endangered and endemic species, initiate a research projects for the manufacture of products useful for mankind by utilizing biotechnology, conserve ecological resources for future generations by using biotechnology and provide technical training and consultancy services in the field of plant systematics and culture technique.

7.2.10.1.7 Pathein University Biotechnology Laboratory

The Pathein University Biotechnology Laboratory was set up in 2000 and the researches and activities The laboratory is focusing its attention on the production bio-fertilizers for local/community needs, production of bio-antiseptic from micro-organisms, use of micro-organisms in fish and prawn culture ponds, production of industrial medicines from various kinds of leaves, from various types of soil and water and observation of useful micro-organisms for the purpose of cultivation and extraction of medicines from traditional Myanmar traditional medicinal plants.

7.2.11 Intensifying Faculty Development to Manage New Advancements in Higher Education

The commitment, skill and knowledge of the faculty play a crucial role in the curriculum reform process. To facilitate tertiary teachers deal with the multifaceted changes resulting from the upgrading of curricula, the introduction of new textbooks, references, courses, and methodology a broad range of reforms was initiated and refresher courses were conducted in all academic departments of higher education institutions.

Information Technology skills were also imparted so that the faculty could maximize their teaching through IT application. Special English language courses for newly appointed faculty were also introduced to improve their English Proficiency and enable them to provide instruction in English effectively.

7.2.12 Enhancing International Co-operation

The special four-year plan gave impetus to higher education institutions to form linkages and collaborations with international higher education institutions and research organizations in order to harness both local and foreign sources for the development of the higher education sub-sector. The first year of the plan saw an upsurge in the number of initiatives that promoted collaborations with regional and international higher education institutions and organizations. These collaborations were in the form of MOUs, training programmes, workshops and seminars conducted by foreign institutions, joint research programmes and invitations to participate in scholarship programmes abroad. Conferences, symposiums, seminars, workshops, meetings, and research have also been held in collaboration with foreign institutions and organizations. International exchange that involves students, faculty and administrators has also grown..

8. Enhancing Diversity in Higher Education

A variety of modalities have been introduced in higher education to create access and promote more choices for those seeking training and education. These include distance education programmes, human resource development programmes offered by higher education institutions and part-time conventional course conducted in the mornings, afternoons or evenings to suit those who are employed.

8.1 Creating Effective Distance Education Programmes

Two Universities of Distance Education, Yangon University of Distance Education in lower Myanmar and Mandalay University of Distance Education in upper Myanmar have been established to provide access to higher education to those who are unable to pursue it at conventional institutions for some reasons.

Under the education development plans, new specializations English, Oriental Studies, Myanmar Studies, Creative Writing, Public Policy, Home Economics, and Business

Management were introduced at the distance education universities in addition to the existing 12 disciplines—Myanmar, Geography, History, Philosophy, Psychology, Law, Chemistry, Physics, Mathematics, Zoology, Botany, and Economics. This raised the number of disciplines being offered to 19, thereby advancing the Universities of Distance Education's efforts to be more flexible, responsive and open. As in other higher education institutions, the credit system was also introduced at the Universities of Distance Education to facilitate student transfer from conventional institutions to those specializing in distance learning and vice-versa. New textbooks were produced in the modular format by textbook committees consisting of specialists in line with the revision of the curriculum. Distance education universities started with simple means — books and assignments — to provide education to their students.

Today Myanmar distance education institutions can harness a variety of means including sophisticated technology to enhance instruction and provide greater services. To facilitate student learning, a studio to transmit distance education programmes has been established to telecast regular programmes using a separate channel. Satellite Data broadcasting system is utilized to transmit the programmes from the studio to the 619 learning centres located at higher education institutions, education colleges and basic education high schools all over Myanmar, so that distance education students can view the programmes at the centre most convenient to them.

The long-term plan seeks to expedite the expansion of the distance education system and transform it into an open university, to create new teaching programmes, to provide both programmes leading to degrees as well as to introduce programmes that will promote skills and to provide the highest and most extensive learning opportunities by utilizing technology.

8.2 Human Resource Development Programmes to Promote Qualified Human Resource

The National Centre for Human Resource Development was established by the Ministry of Education in June 1998 in accordance with the decision arrived at the seminar held earlier in March to diversify education opportunities in order to produce highly qualified human resource needed by a modernizing economy.

Upholding the belief that education is a lifelong learning process, the centres function with the following the main aims:

- to widen the scope of choices for students wishing to pursue job-related knowledge, skills and technology
- to establish new programmes for training and re-training
- to offer opportunities to those graduates who desire to continue with their studies to acquire advanced skills and knowledge
- to establish a parallel education system which nurtures intellectuals and experts needed by the country, to enable those who wish to continue their studies without being a burden to the State
- to economize on the budget provided by the State by conducting courses that charge a minimum amount of tuition fees
- to prevent education wastage by enabling those who have not completed their tertiary level education to do so at their own pace and during their free time
- to confer degrees, diplomas and certificates appropriate to the curriculum and length of the courses
- to utilize retired academics in order to make use of their skills and knowledge

Under the National Centre for Human Resource Development (NCHRD) are the Centres for Human Resource Development established at every higher education institution under the Ministry of Education. The centres identify community needs and initiate vocational, professional and technology based courses that are in demand. The centres for human resource development began their activities in 1998 with certificate and undergraduate diploma courses, but they have now begun to offer degree, postgraduate diploma, and even postgraduate courses.

The Human Resource Development Centre of Yangon University opened certificate courses on Food Technology, Basic Library Science, Basic Electronics, Gemmology (Basic and Advanced) and Information Technology and the Global English course among others. Yangon University of Foreign Languages and Mandalay University of Foreign Languages Human Resource Development Centres are catering to the foreign language needs of the workforce by opening English, Chinese, French, German, Japanese, Korean, Russian and Thai language proficiency courses. The demand for business related courses is also being met by the Human

Resource Development Centres. The Diploma in Commercial Law was initiated by Yangon University and Mandalay University Human Resource Development Centres. The Diploma in Business Studies (DBS), Diploma in Financial Accounting (DFAc), Diploma in Management Accounting (DMAc), Certificate in Business Studies (CBS), Certificate in Advanced Business Studies (CABS) courses were opened by Yangon Institute of Economics Human Resource Development Centre. Diploma in Economics courses, Basic Applied Economic courses, Advanced Level Applied Economics courses, Financial and Management Accountancy courses, Agriculture and Regional Development Studies courses, Certificate Course in Applied Information Technology were also opened at Monywa Institute of Economics Human Resource Development Centre. Courses on social studies, culture and fine arts were also opened by higher education institutions in order to provide individual interest programmes.

A number of courses opened by the human resource development centres were held in partnership with foreign and local private enterprises contributing to their practical relevance. Yangon University of Foreign Languages Human Resource Development Centre in collaboration with TOPA 21st Century Language School of Japan opened Japanese language courses. Similarly Yangon Institute of Education Human Resource Development Centre and New Zealand-Myanmar Education Centre jointly opened the Cyberenglish courses. Software Engineering, Hardware Engineering and Network Engineering courses have been opened at New Century Resource Centre run by the National Centre for Human Resource Development in collaboration with Winner Computer Group, a private computer company.

As these courses are held in parallel to the regular programmes at higher education institutions, this arrangement is often referred to as the **one campus-multi-system arrangement**. The CHRDs will continue to strive to identify the needs of the communities they are based in, promote programmes that fulfill the needs of communities, regions and the state and participate in the development of qualified manpower needed for a modernizing and developing economy.

8.3 Offering Flexible and Convenient Courses

Morning, evening and weekend classes, some leading to diplomas and degrees, have been

opened to cater to the professional needs of those in service. The Department of Physics of Yangon University is providing a wide range of IT courses in collaboration with private IT enterprises. The Department of Law of the same university is providing courses on business and maritime law to update the knowledge of those in the law profession. The Universities of Foreign Languages are also providing foreign languages programmes with just the minimum requirement of matriculation and with no limit placed on age or experience. Yangon Institute of Economics has also initiated evening MBA and MPA to cater to the needs of those working.

8.4 Creating Research and Learning Facilities for the General Public

Another important endeavour by the Ministry of Education to diversify learning opportunities is the establishment of the New Century Resource Centre in three cities, Yangon, Mandalay and Monywa and the Resource Centre for Ancient Myanmar Manuscripts in Yangon and Mandalay. The establishment of the two centres at the same time signifies Myanmar's balanced approach to the development of ICT in the country and its effort to preserve national identity.

The New Century Resource Centre with e-education learning centres, e-education resource centres, computer training centres, language labs and shops selling electronic books and equipment are providing the general public from young primary students to senior researchers with access to e-education facilities similar to the ones established at higher education institutions. The centres also provide people with the opportunity to attend a broad range of ICT related courses such as Software Engineering, Network Engineering, Postgraduate Diploma in Multimedia Arts, Power Window 2000, Computerized Accounting, and Diploma in IT.

The Resource Centres for Ancient Myanmar Manuscripts contain a comprehensive collection of ancient Myanmar paper and palm leaf manuscripts as well as rubbings of Myanmar stone inscriptions and are open to the general public who wish to conduct research.

9. Conclusion

The plans, programmes and activities mentioned in this brief account of the educational development during the past six years are playing a leading role to the restructuring of higher education to fulfil the educational goals of the country in the new century. Successful implementation of the programmes and projects of the first phase of the Thirty-Year Long-Term Education Development Plan has resulted in multifaceted development and unprecedented changes in the higher education sub-sector. The plan is making enormous contributions to the development of qualified human resource with higher education institutions reaching out to local communities to equip them with advanced skills and knowledge. The plan has also made appropriate investments for the establishment of the necessary infrastructure and provided the required facilities for the effective utilization of information technology in both learning and teaching. The plan has generated renewed interest in research with the setting of new objectives, upgrading of research facilities and the establishment of new research centres. Through the harnessing of the 619 learning centres established throughout the length and breadth of the country and the introduction of the **One Campus-Multi-System initiatives** with the provision of educational and training programmes with convenient hours and flexible entry requirements, the plan is contributing to the development of a lifelong learning society. With the introduction of new teaching methodologies, modernized curricula, new programmes, increase in the number of higher education institutions and facilities and better trained faculty the quality of education is being promoted. Higher education is also contributing to the preservation of national identity and national values through programmes that raise consciousness of the wealth of one's history, and the need to be committed to the safeguarding of one's rich culture and time-tested traditional values in the face of the deluge of alien culture and values.

In brief, the education promotion programmes being undertaken will enhance the building of a robust higher education system that can further serve Myanmar's needs as it strives to become a modern and developed nation. Furthermore, it will equip Myanmar citizens with quality education and the advanced skill or knowledge they will need in an increasingly competitive environment and create a firm foundation to pursue lifelong learning while at the same time nurturing the cultural roots and identity of Myanmar.