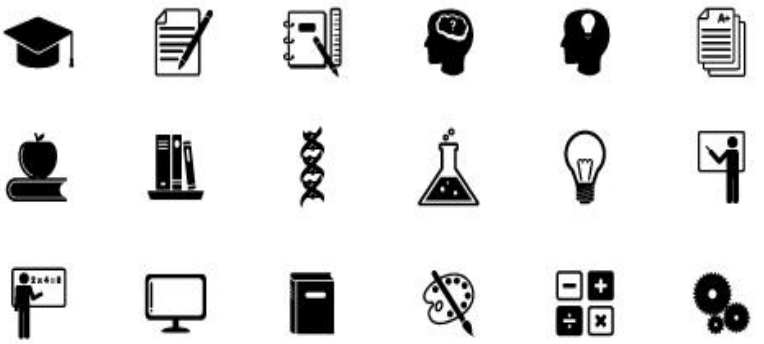
Agensi Kelayakan Malaysia
Malaysian Qualifications Agency

Education Programme Standards



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PREFACE

GLOSSARY

No.	Terms	Description
1.	Accreditation of Prior Learning (APL)	The official recognition of cumulative learning experiences and acceptance of such experiences as valid and meeting and fulfilling requirements for particular levels and specific Educational Programmes, for instance a Bachelor or a Master degree requirement. APL encompasses and goes beyond Credit Transfer or Exemptions. While there are differences, APL is also sometimes termed Accreditation of Prior Experiential Learning (APEL), or Recognition of Prior Learning (RPL), and Recognition or Accreditation of Prior Work Experience (APWE). The qualifications are conferred upon the completion of education or formal training, which can include or relevant to the field of education.
2.	Adequate Educational Resources	Educational resources are described as “adequate” when it is sufficient and as good as is necessary to fulfill the requirements of the Programme Standards: Education (PSE).
3.	Blended Learning	Refers to a mixing of different kinds of learning environments. The terms "blended," "hybrid," and "mixed-mode" are used interchangeably in current research literature.
4.	Blended Learning Approach	An integrated instructional approach that combines face-to-face classroom methods, whether digitally immediate or remote (usually internet-based and technology-mediated) learning.
5.	Childcare centre (TASKA)	A place (in institution, workplace, community or the home) where children below 4 years of age receive alternative care provided by childcare providers.
6.	Community Driven Knowledge Creation	Refer to with more and more people getting educated and being digitalised, the generation of information by community of practice and communities themselves are

No.	Terms	Description
		showing trend of community driven knowledge creation. The information and knowledge that inhere in communities that is shared in the networks is much greater then what governments or companies can gather by themselves.
7.	Credit	A quantitative measurement that represents that learning volume or the academic load to achieve the respective learning outcomes.
8.	Criteria and Standards	The expected levels of attainment which serve as performance indicators.
9.	Discipline Core	Specific modules to a specific discipline of Education identified by this Education Programme Standards.
10.	Educators	Educators are professionals in the education sector including teachers, lecturers, counsellors, administrators, et cet tera.
11.	Good Practices	A set of internationally accepted standards, which are expected to be fulfilled to maintain a high quality of education. Best practices is also commonly used to refer to 'good", "mature"' or "excellent" practices which people or organizations choose to emulate.
12.	Higher Education Provider (HEP)	A body, corporation, organization, institution or other body or persons which conducts higher education or training programmes leading to the award of a higher education qualification.
13.	Learner	A person enrolled in a programme or course of study offered by the HEP. Learners are typically students, young or adult and include teachers, lecturers, counsellors, administrators, et cet tera.
14.	Learning Outcomes	Statements on what a learner should know, understand and can do upon the completion of a period of study.
15.	Lifelong Learning	Continuous building of skills and knowledge through formal and informal experiences encountered during the

No.	Terms	Description
		course of a lifetime. It is the voluntary and self-motivated pursuit of knowledge for either personal or professional reasons.
16.	Life Wide Learning	The continuous, voluntary and self-motivated learning in formal and non-formal and informal contexts for either personal or professional reasons or just for the joy of learning.
17.	Malaysian Qualifications Framework (MQF)	An instrument that classifies qualifications based on a set of criteria that are approved nationally and benchmarked against international best practices.
18.	Modules	Components of a programme. The term module is used interchangeably with subjects, units, or courses.
19.	Preschool (TADIKA)	A place that provides children of ages 4-6 years with early experiences for their growth, development and learning.
20.	Professional Practice/ Internship	A period of time within a programme during which the learners are required to be placed in the workplace for the purpose of applying theory to practice and to gain working experience. Professional practice/internship includes teaching practice, school-based-experiences, internship, and other attachments to the workplace. In the world of work, Professional practice is also the conduct of work based on and guided by the Knowledge Corpus and Code of Ethics of a Profession.
21.	Programme	An arrangement of modules that are structured for a specified duration and learning volume to achieve the stated learning outcomes leading to an award of a qualification.
22.	Programme Aims	An overarching statement on the purpose, philosophy and rationale in offering the programme.
23.	Programme Objectives	Specific statements on what a learner is expected to learn to achieve the programme aims.

No.	Terms	Description
24.	Quality Assurance	Comprises planned and systematic actions (policies, strategies, attitudes, procedures and activities) to provide adequate demonstration that quality is being maintained and enhanced, and meet the specified standards of teaching, scholarship and research as well as student-learning experience.
25.	Quality Enhancement	The steps taken to bring about continual improvement in quality.
26.	Resource Centre	A library in the HEP that includes different kinds of holdings of knowledge resources, and encourages the use of audio-visual aids and other special resources and materials for learning, in addition to books, periodicals, et cet tera.
27.	Scholar –Teacher	The notion that from the outset of selecting teaching as a career and profession, the individual develops a mindset that the noble profession requires not just the development of personal and professional character but also of intellectual character of scholarship. The preferred term scholar-teacher is used in this document to affirm a paradigm of accountability for thought and knowledge leadership among members of the Teaching Profession.
28.	Student Learning Time	A period of time that a learner should spend on the learning-teaching activities for a given credit which comprises guided learning, independent learning and assessment.
29.	Teaching and Learning Space (TLS)	The place where teacher-learner interactions and learning experiences take place. It includes real (physical) and virtual spaces from classrooms to chat rooms and technology enhanced social spaces and virtual (digital or electronic) libraries. TLS can also cross time and space. For example, a two-dimensional TLS

No.	Terms	Description
		grid of time (synchronous and asynchronous) versus location (same and different).
30.	Teaching Schools	Participating schools in the Teaching School Programme. In the 1970s, the University of Malaya established collaboration with *Sekolah Rendah Petaling* as a Teaching School and in 2003 Teacher Training Institutes or Institut Pendidikan Guru (IPG) continued the practice with a large number of schools throughout the country. The main objective of this collaborative smart partnership with selected schools in the neighbourhood of IPGs is to strengthen the knowledge and practice of teaching and learning of school teachers, trainee teachers and IPG lecturers through various activities, including research.
31.	Viva Voce	An oral examination on a student's communication skills and knowledge of relevant facts from their thesis or dissertation in stages or at the end of the candidature.

ABBREVIATIONS

1.	CDKG	Community Driven Knowledge Generation
2.	CMS	Content Management System
3.	COPIA	Code of Practice for Institutional Audit
4.	COPPA	Code of Practice for Programme Accreditation
5.	EPS	Education Programme Standards
6.	HEP	Higher Education Provider
7.	LMS	Learning Management System
8.	MOE	Ministry of Education
9.	MQA	Malaysian Qualifications Agency
10.	MQF	Malaysian Qualifications Framework
11.	QA	Quality Assurance
12.	TLS	Teaching and Learning Spaces
13.	CIEEE	Council on International Educational Exchange
14.	NCATE	National Council for the Accreditation of Teacher Education
15.	MOOCS	Massive Open Online Courses
16.	PSELT	Pedagogy Standards for English Language Teaching
17.	CPD	Continuous Professional Development
18.	INQAAHE	International Network of Quality Assurance Agencies in Higher Education

1. INTRODUCTION

"Much of what students are going to deal with in life involves knowledge and technologies not yet known. The best schools are collegial and collaborative. Good teaching is a team effort"
~ Linda Darling Drummond

The Background: Historical, Social and Philosophical Context

In traditional societies, families provided education for their children through intergenerational learning. Today, nations provide education for their citizens through various kinds of educational and training institutions.

The education and training of teachers is offered through various modalities, levels and specializations. Increasingly, education provisions are provided with an ever developing and sophisticated teaching and learning technologies; the notion of e learning, for instance is now a common practice and new ICT innovations are increasingly used as common conventional technologies in education. Massive Open Online Courses (MOOCs) is now increasing its strategic influence worldwide.

The provisions of education are fundamentally quantitative and qualitative. The fundamental provisions are the educational infrastructures: school buildings with amenities and facilities, classrooms, libraries and learning resources, sports fields, gymnasiums, or recreational facilities such as a swimming pool. Qualitative provisions include aspects such as, well qualified, well trained, experienced and exemplary teachers and administrators, relevant curriculum, effective teaching-learning methodologies, up-to-date teaching-learning, materials, and valid, reliable and holistic assessment strategies. All these provisions should meet national and international quality standards and should be continuously improved upon. The criteria typically used to assess these provisions are access, equity, efficiency, quality, relevancy, currency, creativity and innovations.

As nations develop, education is expected to provide the human resources needed by all other socio-economic sectors of society. Investments in education have become a prerequisite for national development. Human capital development through

education and training encompasses the nurturing of potentialities, competencies, talents and intelligences of citizens to create an enlightened citizenry responsibly engaged in the democratic processes of their society. With the acquired skills and competencies, school leavers are expected to be employable and entrepreneurial, to experience the dignity of productive and meaningful work and labour while contributing to society.

In Malaysia today, education programmes are offered by Teachers' Colleges, Faculties of Education and the *Universiti Pendidikan Sultan Idris* (UPSI) – the Education University, all of which provide adequate resources and, competent and qualified personnel to conduct the programmes. Programmes are also available for educational administrators and leaders to acquire educational management and leadership skills. This Programme Standards for Education guides the formulation of education programmes in Malaysia in meeting and exceeding standards of the teaching profession.

Malaysia invests abundant resources in all levels of its education system. This investment has helped place Malaysian education as one of the leading education systems in the world, benchmarking itself against the best systems of other nations, and measuring its progress against global criteria and standards.

The emphasis in the last two decades had been on higher education. Present emphasis focuses on preschool and early childhood education in recognition that the younger generation of learners are the nation's most precious assets. When the nation's teachers are educated to the highest levels of professionalism, they in turn will educate the young and provide them the best educational opportunities possible. With quality education for all, the nation will generate an enlightened citizenry and highly skilled knowledge workers.

Malaysia's commitment to raise living standards and to improve the quality of life, can only be achieved when its citizens are availed of opportunities of learning throughout their life span. In the community and in the work place, employees and employers alike continue to be learners who acquire more knowledge and competencies applicable to their work and to their lives. A learned citizenry engaged in lifelong

learning and continuous personal and professional development will be confident, with high and sound self-esteem, and, will be globally competitive.

Education draws its knowledge corpus from other disciplines of knowledge in the arts and sciences. The core disciplines of educational sciences include educational philosophy, psychology, sociology, educational policy, management and leadership. Like the discipline of management, the education discipline is a master hybrid discipline, intertwined in multidisciplinary ways to other traditional knowledge disciplines. Sometimes there are overlaps of contents between the disciplines of educational knowledge. Also, different codes or subject titles are used by various institutions for courses which may contain the same subject matter. Subjects such as comparative education, international education, global education or history and philosophy of education may be used interchangeably or with discrete substantive and methodological distinctions. This Education Programme Standards (EPS) does not prescribe nomenclatures but it does propose some good practices in specifying nomenclatures. A sample of nomenclatures of education programmes offered in Malaysia is in **Appendix 1**.

The Critical and Strategic Role of Education: The Importance of Education Programme Standards

Malaysia's aim to become a regional educational hub requires the growth and nurturing of quality teachers benchmarked against international teacher standards. All its national strategic plans emphasize education and the development and sustenance of human capital to achieve knowledge and innovation-based economy and a developed high-income society. The success of this aspiration will depend on effective teacher education and the delivery of quality education in all educational institutions in the country.

This Education Programme Standards (EPS) contains criteria and procedures for quality assurance for teacher education in Malaysia. It provides guidelines for Higher Education Providers (HEPs) to design and deliver relevant programmes to produce professional educators for schools at all levels. It is also intended for use by HEPs as a self-evaluation guide for continuous quality improvement. The document serves as a reference for reviewers in recognition and accreditation of programmes. It is a

frame of reference to assure that HEPs address relevant issues pertaining to Education Programmes in well informed ways.

In addition to serving its purpose as standards to mould and shape teacher education programmes, the EPS also endeavours to draw attention to, and hence stimulate discussions on educational matters and issues that have yet to be explored and addressed. Such intellectual discourse should generate insights for the enhancement of the standards established in the EPS document.

The construction of this EPS is guided by the "Code of Practice for Quality Assurance in Public Universities in Malaysia", developed by the Quality Assurance Department of the Malaysian Ministry of Higher Education (2008) and the "International Recognition in Teacher Education" developed by the Centre for Quality Assurance in International Education (CQAIE http://www.cqaie.org), and, The National Council for the Accreditation of Teacher Education (NCATE), United States. Unit Standards for NCATE, for instance, focus on conceptual framework, knowledge, skills content knowledge, pedagogical content knowledge, pedagogical and professional knowledge and skills, and professional dispositions, assessment system and unit evaluation, field experience and clinical practice, diversity, faculty qualifications, performance and development, and unit governance and Resources. This EPS is also informed by the contributions of the International Network of Quality Assurance Agencies in Higher Education INQAAHE. (http://www.INQAAHE.org)

The Education Programme Standards provides guidelines on curriculum design and delivery as well as non-curriculum matters such as student selection, academic staff and educational resources. It aims to minimize quality control and enhance quality assurance principles, policies and processes in teacher education to build and sustain quality culture (**Appendix 2**). The introduction and dissemination of the EPS would mean greater responsibility and accountability of HEPs in establishing and assuring academic and professional standards and in promoting effectiveness of quality teaching-learning processes. In addition, steps must be taken towards continuous improvement and sustainability of the effectiveness of the learning experiences of pre-service and in-service scholar-teachers and educational leaders. In view of the knowledge traditions of the teaching profession and the challenges of knowledge development, there has to be the reconstruction, redefinition and

acknowledgement, that teachers and educators are, in fact, the earliest knowledge workers. To emphasize this reality and foster a continuing knowledge and learning leadership culture among teachers and educators, we adopt the notion of scholar–teacher who will be engaged in lifelong and life-wide learning and continuous professional development worthy of the profession.

Conceptualization of Programme Standards in Education

The transformative developmental drive towards quality enhancement -- envisioned as stages comprising Input, Process, Product and Outcome as illustrated in **Appendix 3** –forms the basis for the conceptualization of standards in this EPS.

By using facilitative/integrative and a multi-disciplinary approach this EPS re-visits existing areas of quality focus and excellence in education with the aim of improving and aligning them to fulfil expected national needs benchmarked against international best practices. Hence, the quality process is oriented towards future possibilities of creating one of the best educational systems, setting new milestones of excellence.

An education programme guided by this EPS is expected to produce competent, ethical, masterful of immediate and local realities, globally oriented, and professionally qualified scholar-teachers. This EPS is to be supported by the character development agenda and positive teacher attributes as articulated by the philosophy, vision, mission, goals and core values of the HEPs.

The articulation of a quality agenda for education implies that the fundamentals are in place and the system is determined to be competitive. Greater public confidence in the Malaysian education system, and the development of world class educational institutions are realized when the highest professional education (teaching) standards are adopted and made transparent. Effective implementation of the EPS will generate a critical mass of scholar- teachers and educators who provide leadership for the present and next generations of learners, and contribute to build Malaysia as a centre of excellence for educational programmes. All these can contribute to the emergence of new fields of educational knowledge, enhanced capacity of educational institutions, higher levels of abilities of professionals and new milestones in the educational landscape.

The EPS aims to nurture the development of a critical mass of educators who are educational connoisseurs and lifelong contributors.The notion of quality involves the totality of management systems devoted to maintaining and improving the quality and standards of teaching, scholarship, research, and community services. It is also dedicated to the effective enhancement of students' learning experiences and to producing educators who will further develop quality culture of the education system. This EPS comprises of systematic principles and activities necessary to provide confidence that the quality agenda is being addressed in teacher education, in educational institutions and in the educational system as a whole. The standards cover those for teacher education, and, the development of professionals in the educational sciences, in a variety of roles and contexts (including school administration, counselling, sport coaching, and the organising of extracurricular activities). It is expected that the consistent and focused use of the EPS will directly improve the lives of learners, the professional development of educators, the inspiration of colleagues and peers, and, would also further enhance the status of the teaching profession.

The purpose of this EPS document is to provide guidelines in relation to the development and conduct of education programmes, thus, it is important that this document be read together with other quality assurance and policy framework documents. Among the major quality policy-directed documents which should accompany this EPS are as follows:

1. The Malaysian Qualifications Framework (MQF)
2. The Code of Practice for Programme Accreditation (COPPA)
3. The Code of Practice for Institutional Audit (COPIA)
4. Guidelines to Good Practices (GGPs)
5. Malaysian Teacher Standards (KPM)
6. Malaysian Education Quality Standards (KPM)
7. Pedagogical Standards for Language Teaching (ELTC)
8. Malaysia Education Blueprint 2013 – 2025 (KPM)
9. The Early Childhood Education Programme Standards (Forth Coming, MQA 2014).
10. Other Seminal works regarding Standards, such as Standards for Educational and Psychological Testing (American Educational Research

Association, American Psychological Association and National Council on Measurement in Education, 1999).

Particular mention must be made of the Malaysia Education Blueprint (2013 – 2025) and the substance and spirit of the eleven shifts as well as the six aspirations, to transform the education system. It is pertinent to take note that Malaysian universities are engaged in world university rankings hence demanding the use of standards and criteria which are globally applied. The Malaysian school system is also benchmarked against international measures such as Trends in International Mathematics and Science Study (TIMSS) and Programme for International Student Assessment (PISA) and as yet, a programme for Malaysia to be officially involved in, the Progress in International Reading Literacy Study (PIRLS). For purposes of comparisons, continuous improvement and in order to be proficient with the protocols of this Education Programme Standards, HEP leaders are invited to read programme standards for education and other codes of performance standards in other countries. Based on experience, and feedback of suitability and relevance, the criteria and standards set out in this document are subject to review, improvement and modifications. All providers of education programmes should participate and be actively involved in this quality enhancement initiative and agenda.

It is expected that this EPS will transform the quality culture of teacher education in Malaysia and enable teachers across the generations to educate the future generations of students effectively, constructively and inspiringly. We also believe that continuing contributions by educators and HEPS will enhance knowledge-based professionalism, and, assure that the teaching profession becomes one of the most contributive and respected professions in society.

Core Body of Knowledge of Education Discipline

In 2011, MQA introduced a policy to enhance the quality assurance protocols of programme standards by identifying the core body of knowledge within each discipline **(See Appendix 4).** This policy direction is indeed a challenging and exciting task, because the discipline of education is vast, holistic and pluralistic.

To ensure that the task of developing an EPS is, relevant, practical, and manageable five components of the core body of knowledge in education are identified, as follows:

1. The education foundations component
2. The professional practice component
3. The school subject content component
4. The educational electives component
5. The education specialization component

[Please note that the Compulsory university-wide component is the government requirement for all degree programmes. The General Education Subjects (Mata Pelajaran Pengajian Umum) include *Bahasa Melayu Komunikas*i, Malaysian Studies, Presentation Skills, and Entrepreneurship.]

There are Mandatory Courses required by the Government or even by the HEP itself. For reasons of national interest or the interest of students themselves, various courses are made Compulsory. There are also HEP Core Courses such as Bahasa Melayu, Malaysian Studies, Islamic/Moral studies, Social Science/Humanities/Liberal Arts, Co-Curriculum/Scientific, Literacy/Languages, Communications Skills and Talent Development. Beginning 2014 *Mata Pelajaran Wajib* [Mandatory Subjects] are replaced by *Mata Pelajaran Umum* (General Subjects which are Compulsory).

This EPS adopts the above five components while recognising that there are other ways to conceptualize the core body of knowledge in education and that these components are not mutually exclusive.

The "spiral curriculum" of the body of knowledge can be seen through the various conceptualizations of continuous and cumulative mastery of the discipline of education at the certificate, diploma, bachelor, master's, and doctoral levels.

1. The Education Foundations Component

The education foundation component is the core body of knowledge for the discipline of education. The body of knowledge for the education foundations are:

i. history of education
ii. philosophy of education

iii. psychology of education
iv. sociology/anthropology of education
v. comparative, international and global education.

2. The Professional Practice Component

The professional practice component takes on a "clinical dimension" where the professional must master the skills, tools, concepts and applications of the science and art of the teaching profession. This component is typically considered as the pedagogical and teaching learning instructional area. Curriculum, teaching and learning, and assessment are the generic core applicable to all levels of education, all scholar-teachers learners, and all subject specializations.

The professional practice components include practice teaching, mock classrooms, simulations, role play, micro teaching and exercises in teaching laboratories. An essential component of the generic professional practice core is attachment, internship or practicum at relevant workplace within or beyond education and training organizations.

[Please also note that in all professions (for instance, Medicine and Law) "Professional Practice" means practice in the world of work, and the term is not confined to Professional practice during the study programme in order to acquire the skills to enter the profession.]

3. The School Subject Content Component

The school subject content component covers all the school subjects offered in the national school curriculum across all levels of schooling. Typically, teachers are expected to master at least two subject areas as their specializations. With mastery in the content areas of school subject knowledge, teachers should have the confidence to guide students to master the knowledge, skills, attitudes, modes of thinking of subjects such as languages, mathematics, the sciences, vocational and technical

subjects, health and sports sciences, domestic science, history, geography, Islamic studies and moral education.

For instance, School Subjects in Malaysia at the Lower Secondary School Level are subjects such as Bahasa Malaysia; English Language; Science; Mathematic; Geography; History; Living Skills; Biology, Chemistry, Physics, Islamic Studies; Tamil Language; Chinese Language; Optional Subjects: Chinese Language; Basic Arabic Communication; Higher Arabic Communication; Tamil Language; Punjabi Language; Iban Language; and Kadazandusun Language.

It is suggested that the school subject content be cross referenced and linked to the academic subject discipline core in the various degree programme areas offered by higher education providers [HEPs]. For instance, the academic content core of subject specialisations offered at the secondary level in the Malaysian school system (as listed in Appendix 5**)** would be derived from the degree programmes for those subjects as offered in the various Faculties and departments of universities.

The mastery of school subject specializations is typically either prior to pursuing studies in teacher education, or, simultaneously while acquiring the core corpus of academic and professional knowledge, relevant skills, and positive attitudes for the teaching profession. In the former case, the developing scholar-teacher would have acquired qualifications in specific academic discipline areas and then enrol for a Diploma in Education. In the latter case the developing scholar-learner would be simultaneously acquiring and mastering school subject specializations in parallel with the core body of knowledge for the teaching profession in programmes such as Bachelor of Education, Mathematics or Science with Education, ICT and Education, Islamic Studies and Education and the like.

This EPS does not identify the body of knowledge for the various academic and school subject areas*.*

4. The Education Electives Component

Educational electives cover a large range of courses offered at all levels of qualifications. The body of knowledge of educational electives, includes both those related to education disciplines, as well as additional school subjects that the teacher can teach in schools and other generic subjects not directly related to education or school subject areas.

There are two kinds of electives:

A] The first type of electives are electives related to the Education Disciplines, for instance, when: the subjects may not be in the area of studies of the Scholar Teacher. There may be cases when Humanities and Social Science majors may be interested in Science Electives [with or without prerequisites], and, Vice versa. Electives in this category may mean deeper and advanced studies in subjects such as the following: Curriculum Development and Evaluation; Advanced Educational Psychology; Advanced Foundations of Education; Intermediate or Advanced French or Chinese; or Educational Ethnography. Electives also refer to the additional subjects that a graduate teacher has mastered and is qualified to teach in schools. For example, a scholar-teacher majoring in Primary Science Education may take Physical Education as an elective or minor.

B] The second type of electives are electives not directly related to Education Disciplines but offered by the University [or Recognized Partner Institutions] and are subjects, scholar-teachers are interested in, for instance: Russian Literature, Southeast Asian History; Golf; Tennis, Gender Studies. Such electives serve as a form of enrichment and continuing personal development for the scholar-teacher.

5. The Education Specialization Component

The education specialization component may be specialization at the preschool, primary, secondary, post-secondary, tertiary, or continuing education levels. The specialization core can be in the foundation, the pedagogic and assessment areas, the school subject areas or even in the electives, or beyond the foundational, the generic professional core, the electives core or even the school subject areas.

The specialization core can, for instance be, Language Teaching and Linguistics, Mathematics and Science Teaching, History, Geography, Islamic Studies, Technology of Education, Teacher Education, Pre-School Education, Adult Education, Life-Long Learning, Educational Research, Creativity and Innovation Studies, or, Special Education for the handicapped, and disadvantaged, the gifted and the exceptional. Also, specialization can be, for instance in Early Childhood Education, Educational Technology, Educational Management and Leadership, Special Education, Sport Science and Physical Education, Technical and Vocational Education, Islamic Education/Religious Education, Language and Literacy Education, Mathematics and Science Education, Social Science and Humanities Education, Counselling or Adult Education. Specializations may be by levels of specializations or subject specializations. Examples of areas of study in educational programmes are provided in **Appendix 6.**

Educational thought leaders, scholars, and researchers who are responsible for curriculum design and development for pedagogy, andragogy, and assessment can, for instance, pick any of the core body of knowledge and choose to focus, elaborate upon and enhance on the core identified as appropriate to the educational level, such knowledge acquired can be applied in problem solving as well as in initiating innovation and creativity.

***Note**: HEPs are to note that there may be overlaps at the level of courses, themes, topics, sub topics and concepts and theories and even reference books used. Some of the overlaps may be necessary*

and reinforcing and may be deliberate and reasoned overlaps. However, HEPs have the responsibility to ensure that the precious resource of time and expertise which are significant and costly are mindfully managed and there should not be unwitting overlaps or overlaps because of lack of meticulousness.

Education Disciplines and Education Standards

As noted earlier, it is reemphasized that this EPS aims to provide guidelines to the HEP to produce educators and trainers for education institutions from the preschool to the tertiary levels. It is intended as a self-evaluation guide for an HEP's educational programmes. It is also a guideline manual for purposes of recognition and accreditation of programmes. The criteria and standards identified and generated are subject to continuous improvement and modifications based on feedback received and advances and developments in the field.

Contemporary education development recognizes the multi disciplinarity of the knowledge corpus, leading to the emergence of various kinds of degrees and awards which transcend traditional knowledge boundaries, for examples science with education, religion with education and business with education. Irrespective of the multi disciplinarity, the curriculum of education programmes shall address the appropriate educational levels and core essentials of the education discipline. This EPS provides guidelines in the nine areas of evaluation of the Code of Practice for Programme Accreditation (COPPA) which covers the following:

1. Vision, mission, educational goals and learning outcomes;
2. Curriculum design and delivery;
3. Assessment of students;
4. Student selection and support services;
5. Academic staff;
6. Educational resources;
7. Programme monitoring and review;
8. Leadership, governance and administration; and
9. Continual quality improvement.

Levels of Study

The Education Programme Standards describes the different levels of standards leading to the award of qualifications, namely Certificate (MQF Level 3), Diploma (MQF Level 4), Bachelor's Degree (MQF Level 6), Postgraduate Certificate, Postgraduate Diploma and Master's Degree (MQF Level 7) and Doctoral Degree (MQF Level 8).

Programme Offering

There are various ways education programmes are offered by Malaysian institutions of higher education. For instance, there are the stand alone education programmes, education with, major and minor, and a combination of education with other disciplines.

1. **The Stand Alone Programmes**
    a. E.g. Certificate in Pre-School Education, Certificate in Early Childhood Education, Diploma in Education, Diploma in Early Childhood Education, Graduate Certificate in Tertiary Teaching and Learning, Bachelor of Education, Bachelor of Education in Primary Education, Postgraduate Diploma in Education, Post-Graduate Diploma in Higher Education Teaching, Master of Education, MA in Educational Leadership and Management.

2. **Education With Other Discipline Major**
    a. E.g. Bachelor of Education (Mathematics), Bachelor of Education (Science), Bachelor of Education (Economics), Bachelor of Education (Biotechnology) and Bachelor of Education (Teaching of English as a Second Language-TESL).

3. **Combination of Education With Other Disciplines**
    a. E.g. Bachelor of Arts (Education); Bachelor of Islamic Studies (Education), Bachelor of Science (Education) and Bachelor of Biotechnology (Education).

2. PROGRAMME AIMS

"A programme's stated aims reflect what it wants the learner to achieve. It is crucial for these aims to be expressed explicitly and be made known to learners and other stakeholders alike"

~ (COPPA, 2008, pp.10).

The vision, mission and core values of educational programmes are founded on national aspirations and the codes of the teaching profession. The main aims and objectives of an education programme are to produce competent scholar-teachers, education managers and administrators and other education professionals, at all levels of education. Teacher education institutions offer programmes which provide appropriate qualifications to ensure adequate supply of competent, knowledgeable educators and scholar-teachers as critical members of the Malaysian work force. Highly trained personnel in the education sector can directly contribute towards the continuous development of the education system and towards the realisation of the vision and mission of building a developed, sovereign, contributive and peaceful nation.

All programme objectives should be aligned with the eight domains of learning outcomes in the Malaysian Qualifications Framework (MQF):

1. Knowledge;
2. Practical skills;
3. Social skills and responsibilities;
4. Values, attitudes and professionalism;
5. Communication, leadership and team skills;
6. Problem solving and scientific skills;
7. Information management and lifelong learning skills; and
8. Managerial and entrepreneurial skills.

While these eight domains are universal bases for building and reinforcing learning outcomes, there are other domains in supporting learning outcomes. Educators can creatively use these and other domains as well to ensure that the programmes offered meet the highest standards aspired for. In doing so, educators and educational

providers will be applying the principles of flexibility and continuous improvements, in highlighting new discoveries and insights in the knowledge fields without compromising quality, standards and the pursuit of excellence.

This Education Programme Standards (EPS) takes into account and builds upon the Malaysian Teacher Standards (SGM, Standards Standard Guru Malaysia, 2009). The EPS encompasses the strengths of the acquired knowledge and experiences of teacher education under the Ministry of Education (MOE) and the evolving knowledge and experiences contributed by educators working in universities and institutions of higher education.

Malaysian Teacher Standards was formulated to address professional competencies of teachers and to identify readiness of implementation of training needs by agencies and institutions to ensure that required teacher competencies are achieved. The framework encompasses the national mission, national philosophy of education, philosophy of teacher education, the code of the teaching profession, and the work ethics in the Ministry of Education/Education System, eligibility for entry into programme, training, collaboration, infrastructure and info structure and quality assurance. The Standards cover in details professional values of the profession, knowledge and understanding, and competencies in teaching and learning. The users of this EPS can, of course, refer to the SGM as well as other nationally and internationally relevant materials.

The Pedagogy Standards for English Language Teaching (PSELT) provides a useful reference for scholar-teachers and HEPs as they formulate guidelines for professional Practice. The standards enable scholar teachers to identify their training needs and continuous professional development mindful of current developments in education. Six dimensions of standards identified for English Language Teaching (which have relevance to Teaching in other subjects) are as follows: 1. Proficiency, 2. English Language Curriculum, 3. Learner, 4. Methodology, 5. Management, and 6. Assessment. Each dimension has its own set of primary and secondary standards. Adapting from the State of Queensland (Department of Education 2002) Standards, the PSELT standards are presented using the following Protocols: Standard Title, Standard Descriptor, Statements, Indicators, Threshold Level, Threshold Plus, essential Underlying Knowledge and Skills, and Glossary.

Providers of education programmes are encouraged to work towards the academic and professional development of every scholar-teacher learner in the education programmes as they address these education programmes in terms of levels, modes, and approaches of programme offerings. (**See Appendix 6)**

CERTIFICATE

An education programme at the certificate level aims to provide learners with fundamental knowledge and basic skills in teaching and learning. Such certificate programmes also aim to provide basic education and training with a blended approach that includes practical knowledge in operating schools, kindergarten and coaching centres with a preliminary understanding of theoretical underpinnings.

The programme objectives at the certificate level are to educate and train learners to become graduates who are able to:

1. acquire an understanding of basic knowledge of the (school) subject matter;
2. apply the pedagogical content knowledge of subject matter in teaching-learning contexts;
3. acquire, internalize and apply the general skills of teaching-learning and instruction;
4. acquire, internalize and apply positive professional values and practices; and
5. continuously and incrementally develop general knowledge and individual talents and their fullest potentialities.

DIPLOMA

An education programme at the diploma level aims to provide learners with a broad-based knowledge and intermediate-to-advanced skills with appropriate autonomy in teaching and learning. Diploma level programmes also aim to provide a broad-based education and training with blended developmental approaches that include managerial and administrative knowledge in operating schools, kindergarten and coaching centres with an evolving understanding of theoretical underpinnings of educational disciplines.

The programme objectives at the diploma level are to educate and train learners to become scholar-teacher graduates who are able to:

1. apply broad-based knowledge of the (school) subject matter and practical skills to educational settings;
2. communicate, lead, engage and contribute in teams in problem solving tasks in educational settings;
3. use information effectively and acquire administrative skills pertaining to educational development;
4. continuously and incrementally develop general knowledge and individual talents and the fullest personal potentialities; and
5. become fully committed towards the profession and develop responsibilities towards society;

BACHELORS DEGREE

An education programme at the bachelor level aims to provide learners with in-depth knowledge and skills, simultaneously nurturing capacities of a high degree of professional and intellectual autonomy, adaptability and versatility in teaching and learning. Such a programme also aims to provide advanced education and training with blended approaches that include managerial and administrative knowledge in operating schools, kindergarten and coaching centres, based on an understanding of theoretical underpinnings of education.

The degree programme is also to produce skilled educators who are able to confront challenges faced during their experiences in teaching, managing and supervising students, by familiarising them with relevant, appropriate and significant research-based knowledge in different areas of education.

The programme objectives at the bachelor level are to educate and train learners to become graduate scholar-teachers who are able to:

1. acquire, and apply a coherent and detailed knowledge and understanding of the underlying values and principles of relevant curriculum frameworks in the school system;
2. acquire, and apply conceptual understanding of the diversity of the learners' backgrounds, personalities, the complexities of the education

processes from early childhood education to the highest level of education;

3. explore and create opportunities and possibilities in implementing innovative and relevant educational programmes, as well as demonstrate, uphold and cherish the ethics and professional codes of practice and values of the teaching profession;
4. initiate and foster positive and productive relationships with families and the community as well as demonstrate the capacity to engage in life-long learning and life-long contribution;
5. acquire, apply and exercise acts of professional leadership in accordance with the responsibilities given or initiated by the professional scholar-teacher; and
6. continuously and incrementally develop general knowledge and individual talents and the fullest personal personalities.

POSTGRADUATE CERTIFICATE AND DIPLOMA

An education programme at the postgraduate certificate or postgraduate diploma level aims to enable graduates to obtain qualifications with the corpus of knowledge and competencies that bridge the bachelors and the master's qualifications. Collectively, the postgraduate certificate and diploma serve to provide graduates with advanced knowledge and skills in selected and focussed areas of educational development to enable scholar-teachers to deal with the demands of new developments in the fields of education.

The programme objectives at postgraduate certificate and diploma levels are specifically to educate and train learners to become graduate scholar-teachers who are able to:

1. use knowledge and skills that enable them to work effectively in a range of educational settings;
2. foster informed insights, awareness of, interest in and commitment to the aims and values inherent in the theory and practice of education, in various contexts within the educational settings;

3. commit to raising standards of education and use problem solving and scientific skills to implement the curriculum relevant to the needs of learners in particular educational settings;
4. demonstrate a capacity for reflection and critical analysis of scholar-teacher's own practice and, anticipate and use innovation for continuing professional development; and
5. continuously and incrementally develop general knowledge and diverse individual talents and their fullest potentialities.

MASTERS DEGREE

An education programme at the masters level aims to provide graduates with advanced knowledge in specialized areas of education, with clear directions and pathways to acquire, generate, enhance, hone knowledge and skills, whilst making cross-linkages with other knowledge disciplines such as the humanities, the social sciences and the physical sciences.

The programme objective at the masters level is specifically to educate and train learners to become graduate scholar-teachers who are able to:

1. make judgments of relevant theories and practices and demonstrate capability of producing new and creative knowledge in order to be effective and inspiring professionals;
2. critically analyse, and synthesize the understanding of their own sources of mature professional knowledge and professional practices to solve significant problems;
3. plan and execute innovative projects, research initiatives and write dissertations, theses and reports for the purpose of building and applying knowledge for the benefit of the profession and society as a whole;
4. demonstrate capabilities in generating and communicating knowledge effectively through the practice of life-long learning and life-long contribution;
5. lead and participate in knowledge generation and in championing intellectual property rights and acknowledgments of original works by others, guarding against plagiarism and other academic improprieties; and
6. acquire general knowledge and develop diverse educational specializations, individual talents and potentialities.

Note:
Some Malaysian universities have begun to offer an M. Phil degree programme in education. Typically an M.Phil in education is a research degree programme with a study duration between 12 to 24 months for full time and 24 to 28 months for part time studies. The length of the thesis is approximately 50,000 words. The M.Phil thesis enriches the body of knowledge of the field of education through analysing, applying, clarifying, critiquing and interpreting the specific body of knowledge concerned. The M.Phil degree is a level 7 qualification as per the MQF. This Education Programme Standards does not cover the M. Phil.

DOCTORAL DEGREE

An education programme at the Doctoral level aims to enable graduates to become exemplary educational leaders, policy makers, practitioners, educational researchers and thought leaders. The programme also aims to provide graduates with the ability to undertake scholarly research and be in the forefront of their specialized fields; become credible authorities and experts, as professional educators, who would further facilitate the generation and advancement of knowledge and set the highest standards of professionalism. Doctoral programmes must contribute to both the development of individual scholars and the development of learning communities, involving schools, post-secondary institutions, workplaces, and community-based organizations. The graduate attributes of doctoral degree holders, include, the mastery of multidisciplinarity and multiple intelligences and modes of thinking in educational and non-educational contexts, and, deep and broad understanding of multi-culturalism and diversity. Such graduates would also have the knowledge and intellectual capacity to engage in inter-cultural and inter-disciplinary dialogues, to understand profoundly the various schools of social and educational thought, and, to meaningfully contribute to solve educational problems, nationally and internationally.

The programme objective at the Doctoral level is to educate and train learners to become graduates who are scholar-educators able to:

1. grow and become accomplished and experienced educational professionals able to make judgments of relevant theories and practices and be capable of producing new and relevant knowledge through research;
2. synthesize and evaluate professional knowledge and practice and apply such knowledge to solve significant problems;

3. initiate and innovate independent projects and research activities for the purpose of building and applying knowledge for the benefit of the local community, national society and the global community;
4. participate in scholarly discourses and disseminate knowledge through publications and journals and other means of knowledge dissemination in the academic and non-academic world; and
5. develop expertise in teaching, coaching and mentoring and build credibility to become role models in appropriate educational contexts.

3. LEARNING OUTCOMES

"The learning and knowledge that we have, is, at the most, but little compared with that of which we are ignorant"

~Plato

"*The quality of a programme is ultimately assessed by the ability of the learner to carry out their expected roles and responsibilities in society. This requires the programme to have a clear statement of the learning outcomes to be achieved by the learner" (COPPA, 2008, pp.11). These learning outcomes should cumulatively reflect the eight domains of learning outcomes, which are significant for Malaysia (MQF, 2007, Para 15).*

Education programmes must be aligned to the eight domains of the MQF and the realms of knowledge, specifically the body of knowledge of the education disciplines. There is commonality in the focus of contents in the knowledge, skills, values and attitudes related to the fields of education, at various certification levels, although such contents may vary in breadth, depth, experience, and significance. The criteria of breadth, depth and levels of difficulties and complexity, are typically determined by the time spent on teaching and learning; a higher degree of intellectual and mindful autonomy; expectations of depth in reading, thinking, discourse and research, the originality of work expected to be produced, and the allocation of credit hours. It is reemphasized that the corpus of knowledge, skills and attitudes acquired by all scholar-teachers in the teaching profession would be similar, but the difference in professional acumen, cumulatively, would be only in depth, breadth, experience, specialization and significance**.**

The goals and expected outcomes of an education qualification would be articulated and reflected in the curriculum of the programmes and in the various approaches and models of assessment. The allocation of credit hours, class time and student learning influence the level of mastery of the various subjects by the scholar-teacher. The following goals are examples of the goals appropriate for the different levels of qualifications.

CERTIFICATE

At the end of the programme scholar-teachers should be able to:

1. demonstrate basic knowledge and understanding of the structure, content and methodology relating to teaching and learning;
2. demonstrate basic practical skills which can be applied to educational settings;
3. articulate depth of awareness of the importance of education in society;
4. show evidence of adequate professional values, attitudes and professionalism;
5. show evidence of adequate communication, leadership and team skills;
6. apply basic problem solving and scientific skills to solve educational problems;
7. identify and categorize information to promote effective teaching and learning;
8. exhibit basic managerial, entrepreneurial and ICT skills pertaining to personal and institutional development; and
9. continuously and incrementally develop encyclopaedic general knowledge and diverse individual talents and potentialities.

DIPLOMA

At the end of the programme scholar-teachers should be able to:

1. demonstrate broad-based knowledge of the structure, content and methodology of teaching relating to student learning;
2. apply advanced practical skills to educational settings;
3. demonstrate responsibilities towards the needs of education in society
4. demonstrate commitment to professional values, attitudes and professionalism;
5. show evidence of competent and thoughtful communication, leadership and team skills;
6. apply problem solving, scientific skills and creative thinking in educational settings;
7. apply and analyse information to promote effective teaching and learning in various education settings;

8. exhibit intermediate managerial, entrepreneurial and ICT skills pertaining to personal and institutional development;
9. continuously and incrementally develop encyclopaedic general knowledge and diverse individual talents, and their fullest potentialities; and
10. be actively engaged in contributions to community development through professional organizations or voluntary organizations.

BACHELOR'S DEGREE

At the end of the programme scholar-teachers should be able to:

1. analyse and develop understanding of the structure, content and methodology relating to student learning in specific subjects, in cross-curricular activities and programmes, and meet the challenges of the whole school curriculum;
2. function effectively in applying different philosophical underpinnings in education and practical skills at different levels and in different educational settings;
3. competently, creatively and innovatively promote the utilization of the knowledge corpuses of the teaching profession and protocols of quality practices in educational settings as well as address sensitively, effectively and mindfully the multicultural contexts of learner diversity to foster learning and nurture the talents and potentialities of learners;
4. meet the requirements of established professional teaching standards at all levels (schools, colleges, universities and other learning organizations);
5. apply knowledge of interpersonal skills, communication skills, and, have the capacity to work collaboratively and independently to solve problems in different educational settings;
6. demonstrate characteristics of professional leadership appropriate to the responsibility given;
7. apply problem solving and scientific skills as well as awareness of the role of research to inform their evolving professional practice, mindfully, through knowledge mastery and understanding;
8. reflect upon and learn from their own experiences in order to advance and take their own learning forward, for instance, using the theory of constructivism;

9. exhibit managerial, entrepreneurial and ICT skills as well as be responsive to the changing nature of education as an academic and professional discipline;
10. continuously and incrementally develop encyclopaedic general knowledge and diverse individual talents and, their fullest potentialities; and
11. be actively engaged in contributions to community development through professional organizations or voluntary organizations.

POSTGRADUATE CERTIFICATE AND POSTGRADUATE DIPLOMA

At the end of the programme, scholar-teachers should be able to:

1. demonstrate the uses of knowledge and skills which enable them to work effectively in a range of educational settings;
2. foster the development of informed insights into the cultural, social, political, economic and religious contexts within which schooling takes place;
3. demonstrate an awareness of, interest in and commitment to the aims and values inherent in the theories and practices of education;
4. commit to raising standards of education and improving student progress;
5. demonstrate the capacity to use problem solving and scientific skills in implementing the curriculum relevant to the needs of learners in any particular educational settings;
6. demonstrate a capacity for reflection and critical analysis of their own practice and for their own continuing professional development;
7. demonstrate an understanding of the changing world and foster the development of professional mind-sets which are able to objectively weigh, make decisions, anticipate and accommodate innovation;
8. continuously and incrementally develop encyclopaedic general knowledge and diverse talents, and, potentialities;
9. develop expertise in teaching, coaching and mentoring and build credibility to become role models in appropriate educational contexts; and
10. be actively engaged in contributions to community development through professional organizations or other voluntary organizations.

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MASTERS DEGREE

At the end of the programme the scholar-teachers should be able to:

1. apply and integrate knowledge relating to current research issues in specific areas of study;
2. apply research techniques to acquire, interpret and extend educational knowledge in areas of study;
3. demonstrate the capability to communicate, lead and work together in building new knowledge;
4. synthesize advanced knowledge and engage in problem solving and scientific skills;
5. demonstrate the capabilities and dispositions to work as engaged professional educators in building learning communities into the future;
6. design and conduct research professionally and ethically; and
7. continuously, incrementally and cumulatively develop encyclopaedic general knowledge and diverse individual talents and potentialities.

DOCTORAL DEGREE

At the end of the programme, scholar -teachers should be able to:

1. demonstrate systematic comprehension and in-depth understanding of a specific area of study;
2. demonstrate the capability as researcher, and, the skills to supervise research projects;
3. critically analyse, evaluate and synthesize new and complex ideas;
4. demonstrate critical, creative and analytical thinking, and effective problem-solving;
5. broaden the boundary of knowledge through in depth thesis exposition of a field and knowledge generation in the field of studies;
6. communicate mature knowledge to peers, scholarly communities and society at large through publications and other academic media;
7. demonstrate the capacity to understand and advance educational thought in multidisciplinary ways;
8. develop capacity to contribute meaningfully to development beyond the education sector;

9. develop knowledge mastery which enhance the capacity for discourse and engagement with knowledge and thought leaders in other fields; and
10. continuously and incrementally develop encyclopaedic general knowledge and diverse individual talents and potentialities.

4. CURRICULUM DESIGN AND DELIVERY

"Education is a social process. Education is growth. Education is not a preparation for life; education is life itself"
~John Dewey

For the purpose of this Programme Standards, reference is made to the Code of Practice for Programme Accreditation (COPPA) and in particular, the section on 'Curriculum Design and Delivery'. "The term 'curriculum design and delivery' is used interchangeably with the term 'programme design and delivery'. "Programme" means "an arrangement of courses that are structured for a specified duration and learning volume to achieve the stated learning outcomes, and, usually leading to an award of a qualification" (COPPA, 2008, p.12). This section of the Programme Standards contains basic and enhanced statements pertaining to the structure and delivery of a programme within the field of Education.

General Guide

There is a rich literature on curriculum design, development, delivery, and evaluation that can be applied to the curriculum design of education sciences and teacher education programmes. This section provides broad guidelines to the development of curriculum for education programmes. The structure of any particular education programme and the contents for the various courses in a programme can be collectively generated by the community of practitioners, education experts, appropriate and significant stakeholders.

Curriculum Design

Curriculum design can be defined as a strategic process of developing a programme of learning that enable learners to achieve the appropriate level and scope of knowledge, disciplinary skills and professional values which should be mastered by the scholar-teacher on completion of the study. The process of curriculum design should be based on curriculum theories and best practices from established sources. There are various approaches in designing the curriculum, for example, the learner-centered, subject-centered, problem-centered, evidence-based, research-centered, project-based approaches, broad-based or spiral curriculum.

The curriculum design for education provides the framework and guidelines for teaching and learning, social responsibility and accountability, the sources of the knowledge base, professional values, and social development. The process of developing the curriculum includes the aims, objectives, and learning outcomes of the educational programmes, organization of the content, and methods of delivery, monitoring, supervision, and evaluation.

Appropriate and effective mapping of components for curriculum design are critical prerequisites for the development of good educational programmes. This education programme standards provides general criteria for the components of curriculum design, namely:

- program aims and objectives
- range of subjects provided
- structure and sequence of the content
- amount of time allocated to each subject
- delivery methods of instructional content
- means and approaches of evaluation

The program aims and objectives are stated in the previous section.

This section provides guidelines on (1) the selection of learning content; (2) how the components of content are arranged to engage students so as to achieve the objectives and outcomes; and (3) how the learning components are delivered to facilitate student learning. Various means of evaluation of learners' educational experiences are presented in the section on "assessment of student learning".

Education programmes can be categorized into several levels, namely, certificate, diploma, bachelor, master, and doctoral degrees. Programmes should be designed in an integrated and balanced way. In this guide, programmes at each level are categorized into compulsory module, core module, including education common core, discipline core courses, professional practice and elective modules. The credits and time allocation for scholar-teacher independent learning (SLT) are the subjects of continuing debates and research**. (Appendix 7)**

In all education programmes there is the requirement and the expectation that there should be engagement of relevant stakeholders in the design, delivery and review of

the curriculum. These stakeholders include educational leaders, school practitioners, knowledge and thought leaders, journalists, philosophers, educational administrators, policy makers, parents, community and student leaders, government representatives, employers, textbook writers and media content developers, education consultants and experts. HEPs should wisely select the mix of stakeholders as advisory members in committees who can contribute relevantly in any particular educational programmes.

Program design is considered in the four dimensions, i.e., scope, sequence, integration and continuity, represented in the horizontal and vertical relationships of arrangements of the content. First, horizontally, the integration of multidisciplinary knowledge should be emphasized at each level. For example, each level (e.g., certificate, diploma, bachelor, master degree level) consists of foundation courses, disciplinary courses, elective courses and teaching practice which are categorized into compulsory module, core module [and professional practice], elective module to provide students with comprehensive understanding and knowledge in educational sciences and professional teaching. Second, the vertical relationship focuses on the sequence and continuity of the content in the respective subjects, that is, the depth of difficulty and complexity in each subject increases as the degree level is raised and advanced. For example, courses on child education at certificate level require students to master the basic knowledge and skills, while it requires advanced and deeper understanding and application of knowledge and skills at the diploma and bachelor levels. At the specific programme and subject level, collaborative efforts and engagements between curriculum specialists, teachers, and policy makers and other stakeholders in the education industry or education services would be particularly important in formulating and building systematic, integrated and effective Curriculum Plan Standards.

Body of Educational Discipline Knowledge

As discussed earlier, there are overlaps among the courses in the five components of the educational knowledge disciplines. Also, for the purpose of practical coordination and presentation in the EPS, the core modules of educational discipline knowledge are presented into three categories, that is;

1. Education common core (The education foundations component);
2. The professional practice and discipline core (The professional practice component]; and
3. The electives.

The Education Common Core (The Foundations component) should include courses, such as, philosophy and history of education, psychology of education, sociology of education, and comparative, global, or international education. The courses in education common core establish the foundation of knowledge in education science. Moreover, the common core attempts to enhance learners' understanding of educational knowledge in general, and, knowledge of Malaysian education to enable students to locate education in system specific, local context, and, to think critically about it.

The School Subject Content Component as in **Appendix 5** is not presented in the core module in this EPS. The Specialization Component is actually subsumed within the specialization of any particular programme and is evidenced when the certificate, diploma or degree programmes is named, for instance, Certificate in Early Childhood Education, or Diploma in Early Childhood Education, or Bachelor of Special Education or MA in Educational Leadership and Management.

Educational Discipline Core Courses are determined by individual institutions according to their needs on specific programmes. These courses provide the basis for students' understanding of the practices of teaching and learning, assessment, pedagogical and content knowledge in specific subjects. Professional practice is a practical component that is imperative in the education of teachers. Professional Practice provides learners with opportunities to integrate theory and practice. Scholar-teachers should be provided with opportunities to observe experienced teachers teaching and be involved in a wide range of school activities to understand teaching itself and reflect critically on their practice. The courses should enable scholar-teachers to plan for, undertake and experience class teaching-learning, and, assessment using a wide range of strategies. Scholar-teachers should have relevant and optimum opportunities to develop classroom, organisational and behaviour management

skills. In addition, scholar-teachers should be encouraged to seek and receive advice and guidance in a supportive professional learning environment.

Elective Modules should be included in the program design at different levels. An elective module aims at enriching educational foundation studies, catering to learners' personal and professional development according to the needs of the individual learners. The courses in elective modules component are determined according to the needs of the programme in respective institutions.

Compulsory Modules encompasses the subjects considered as a national requirement or the requirement of the HEPs. The term "Compulsory Module" as used here does not fall within the conceptualization of the five components of education disciplines.

The Compulsory modules generally include courses to provide students with an understanding of Malaysian culture, history, politics, ethnic relations, common core national belongingness values, the educational system and socio-politico and economic backgrounds, as well as language and communication skills and talent development.

Programme Structure and Delivery

The tables below represent the basic requirements for all levels of qualifications. They indicate the body of knowledge required from Certificate to Doctoral degree, as well as the allocation of credits and percentages at each level. These tables should be read together with **Appendix 4.**

A. CERTIFICATE

Table 1:

MINIMUM GRADUATING CREDIT – 60			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
HEP Compulsory Courses	7-9	12-15	Please refer to MOE's and HEP's Policies.
Education Foundation	12-18	20-30	Please refer to pages 7-11 of the text for body of knowledge details
Discipline Core	29-35	48-58	
Professional Practice	4-6	7-10	Attachment at relevant workplace
Total	60	100	

B. DIPLOMA

Table 2:

MINIMUM GRADUATING CREDIT – 90			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
HEP Compulsory Courses	9-15	10-17	Please refer to MOE's and HEP's Policies.
Education Foundation	15-27	17-30	Please refer to pages 7-11 of the text for body of knowledge details
Discipline Core	39-48	43-53	
Professional Practice	6-15	7-17	Attachment at relevant workplace
Elective	0-6	0-7	
Total	90	100	

C. BACHELOR'S DEGREE

Table 3:

MINIMUM GRADUATING CREDIT - 120				
COMPONENT		**CREDIT**	**PERCENTAGE**	**REMARKS**
HEP Compulsory Courses		12-18	10-15	Please refer to MOE's and HEP's Policies.
Education Foundation		21-30	17-25	Please refer to pages 7-11 of the text for body of knowledge details
Discipline Core		34-43	28-36	School Subject Content or Specialization
Professional Practice		8-14	7-12	Attachment at relevant workplace
Elective	Related to Discipline Core *	18-21	15-18	
	Open**	9-12	7-10	
Total		120	100	

Note:

***** The "discipline core" is **used** interchangeably with "major," and, "elective" with "minor"

** Open electives may be offered from within the broad area of education disciplines or from other disciplines.

D. POST GRADUATE CERTIFICATE

Table 4:

MINIMUM GRADUATING CREDIT – 20*			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
Education Foundation	3-6	15-30	Please refer to pages 7-11 of the text for body of knowledge details
Discipline Core	8-12	40-60	
Professional Practice	2-4	10-20	Attachment at relevant workplace within or beyond education and training organizations.
Elective	2-3	10-15	
Total	20	100	

Note:

* The Post Graduate Certificate is not a certification for classroom teaching, it is for mastery of a specialization, for personal enhancement and enrichment in the field of education.

E. POST GRADUATE DIPLOMA

Table 5:

MINIMUM GRADUATING CREDIT – 30			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
Education Foundation	12-15	40-50	Please refer to pages 7-11 of the text for body of knowledge details
Discipline Core	6-9	20-30	
Professional Practice	3-6	10-20	Attachment at relevant workplace
Elective	3-6	10-20	
Total	30	100	

F. MASTER'S DEGREE BY COURSEWORK

Table 6:

MINIMUM GRADUATING CREDIT – 40			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
Compulsory Courses	9-13	22-32	e.g.: Qualitative and Quantitative Research Methods; Seminar in Education and Academic and Professional Writing
Discipline Core/Elective	15-25	38-63	Electives from the discipline of education
Project Paper/Practicum/ Other Courses(for 100% coursework)	6-12	15-30	
Total	40	100	

Note:

1. Coursework component must include courses in theory and research methodology.

G. MASTER'S DEGREE BY MIXED MODE

Table 7:

MINIMUM GRADUATING CREDIT – 40			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
Compulsory Courses	12-20	30-50	e.g.: Qualitative and Quantitative Research Methods; Seminar in Education and Academic and Professional Writing
Discipline Core/Elective			Electives from the discipline of education
Dissertation	20-28	50-70	
Total	40	100	

Note:

1. Coursework component must include courses in theory and research methodology.
2. Ratio of coursework to dissertation is 50:50 or 40:60 or 30:70.

H. MASTER'S DEGREE BY RESEARCH

Table 8:

MINIMUM GRADUATING CREDIT – no given credit value	
COMPONENT	**REMARKS**
Dissertation	1. Candidates must have followed a research methodology course 2. The following requirements must be decided by HEP: a) Relevant prerequisite courses b) Maximum period of candidature c) Format of the dissertation 3. The recommended length of dissertation: minimum 50,000 – 60,000 words

I. DOCTOR OF EDUCATION DEGREE BY COURSEWORK

Table 9:

MINIMUM GRADUATING CREDIT – 80			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
Compulsory Courses	12-15	15-19	e.g.: Qualitative and Quantitative Research Methods; Seminar in Education and Academic and Professional Writing
Discipline Core/Elective	30-38	37-47	Electives from the discipline of education
Thesis	30-35	38-44	
Total	80	100	

J. DOCTORAL DEGREE BY MIXED MODE

Table 10:

MINIMUM GRADUATING CREDIT – 80			
COMPONENT	**CREDIT**	**PERCENTAGE**	**REMARKS**
Compulsory Courses	24-40	30-50	e.g.: Qualitative and Quantitative Research Methods; Seminar in Education and Academic and Professional Writing
Discipline Core/Elective			Electives from the discipline of education
Thesis	40-56	50-70	
Total	80	100	

Note:

1. Coursework component must include courses in theory and research methodology.
2. Ratio of coursework to dissertation is 50:50 or 40:60 or 30:70.
3. The recommended length of theses: minimum 60,000 – 70,000.

K. DOCTORAL DEGREE BY RESEARCH

Table 11:

MINIMUM GRADUATING CREDIT – no given credit value	
COMPONENT	**REMARKS**
Thesis	1. Candidates must have followed a research methodology course 2. The following requirements must be decided by HEP: a) Relevant prerequisite courses b) Maximum period of candidature c) Format of the dissertation 3. The recommended length of dissertation: minimum 80,000 – 100,000 words

Criteria and Guidelines for Curriculum Delivery

Curriculum delivery focuses on the process to engage students in a designed programme to achieve expected learning outcomes of the programme (MQA, 2010). The delivery of curriculum is crucial since it has direct impact on students' learning and achievement of expected learning outcomes. The delivery strategies of the programme should be in coherent alignment with educational philosophies, curriculum content and assessment processes. It should be based on established and mature theories, such as, constructivism or inquiry- discovery learning, mastery and accelerated learning theories, behaviorism theories, motivation theories, brain-based theories, social cognition theories, et cetera.

Delivery Strategies

The delivery of the programme may involve the use of approaches, strategies and techniques that include lectures, seminars, tutorials, invited/visiting speakers, workshops, use of online resources, e-learning, mobile learning, open book, peer presentations, study groups, project work, project-based learning, fieldwork, practical work, problem-based learning, research-based learning, viva voce, analysis of media

materials, microteaching, ICT based interactive learning, inquiry-based learning, action learning, independent studies and other approaches, strategies and methods which may be applied by the creative, imaginative, and innovative scholar-teacher.

Professional practice, integrating theory and practice, along with mentoring, collaborating, and cooperating strategies of teacher support, is the main strategy that should be used to meet the time-tested standards of the teaching profession. The professional practice component enables the scholar-teacher to acquire knowledge and teaching skills in a real-life setting at the workplace. This component can be delivered through school-based experiences, microlaboratory teaching, practicum and internship. Its delivery can be appropriately sequenced at various points in the programme to ensure the spiral and developmental nature of the curriculum. For example, scholar-teachers as students could be exposed to school-based experiences in the first year of study, followed by practicum in the subsequent years, and, finally internship in the final year. Such a course of study ensures that the scholar-teacher student is given the opportunity to bridge the gap between theory and practice in a progressive and constructive manner, building robust professional acumen of knowledge corpus cumulatively.

Four stages of effective curriculum delivery

There are four stages involved in effective curriculum delivery cycle, that is, plan, deliver, assess, and evaluate (MQA, 2010). **(See Appendix 8)**

First, during the planning stage, adequate resources should be allocated for delivery modes, and sufficient training and support should be provided to ensure that the learner and the academic staff are familiar with the different delivery methods. A variety of techniques should be used in the delivery of the programme according to the structure of the programme such as, lecture, action learning, self-directed learning, cooperative learning (problem-based learning, project-based learning), technology-based delivery (e.g., using online methods, tele-conferences and mobile systems), experiential learning (e.g., field work, on-site learning), and work-based learning (e.g., industrial training, practicum, work attachments). Moreover, delivery methods should be combined and used to serve the different purposes of different

programme stages. Delivery strategies should be aligned to educational philosophies, curriculum content, and assessment processes.

Second, delivery methods should be mapped against the eight MQF learning outcome domains (MQA, 2010).For example, the domain of values, attitudes and professionalism, are more suitable for work-based learning methods (e.g., work attachment); for the domain of knowledge, a combined use of lecture, tutorial, discussions, debates, forums, presentations, seminars, demonstrative teaching, and field trips are more appropriate.

Third, various assessment techniques should be employed to ensure that learners had actually been enabled to master theory and practice through .effective delivery methods. For example, for technology based delivery mode, discussions and conversations in electronic and digital mediums can be used to assess learning progress; for experiential learning, the approach most suitable are direct observation by the scholar-teacher at the worksite, and assessment of reports and learning logs produced by the learners.

Fourth, quality programmes require continuous monitoring and review of the previous learning and teaching activities so as to further develop the scholar-teacher and simultaneously improve the programmes. Evaluation activities are to be undertaken at all levels of teaching and learning processes, including, evaluation of lesson plans, class schedules, and, particularly, student performance.

5. ASSESSMENT OF STUDENT LEARNING

"…institutional assessment efforts should not be concerned about valuing what can be measured, but, instead about measuring that which is valued"
~Banta, T. W

"Student assessment is a crucial aspect of quality assurance because it drives student learning. It is one of the most important measures to show the achievement of learning outcomes. The result of assessment is also the basis in awarding qualifications. Hence, methods of student assessment have to be clear, consistent, effective, reliable and in line with current practices and must clearly support the achievement of learning outcomes" (COPPA, 2008, pp.15).

Specific methods of assessment to be used will depend on the specific requirements of particular modules, both academic and co-curricular. However, as a general guide, the following Assessment Principles should be considered, and, as appropriate adhered to:

1. Summative and formative assessments, norm referenced and criterion referenced assessment should be used together;
2. Assessment could be based on a learning taxonomy, such as, Bloom's Taxonomy; or Anderson & Krathwohl's Taxonomy ;
3. HEPs should continue to use current assessment modes of essay, objective test, and initiative evidence and demonstration of work through the digital media assessment mode;
4. Student intellectual and generic skills should be assessed using various appropriate modes of assessment, encompassing cognitive, psychomotor and affective domains and using measures ,of self-assessment and peer evaluation, and, when available and appropriate, to develop use culturally valid and reliable standardized testing instruments;
5. Practical skills should be assessed continuously with or without final examinations, in modules requiring practical skills. (A pass in practical work is compulsory. A pass implies that the examiner is satisfied that the student has met the learning outcomes of the particular subject);

6. The types of assessments indicated below are merely examples. Higher Education Providers (HEPs) are encouraged to use a variety of methods and tools appropriate for the learning outcomes and competencies which should be measured;

   Generally, students shall be evaluated where appropriate through:

   - Examination

     – Closed/Open book, Take-home, Viva Voce, Mid Term, written test;

   - Coursework

     – Assignments, Quiz, Laboratory Report;

     -- Other kinds of Reports, Journals, Logs

   - Projects

     – Individual/Group, Long/Short; and

   - Others

     – Class Participation, Group Activities, Presentation, Portfolio

7. Valid and reliable, creative and innovative means of evaluating co-curricular skills at different levels of attainment, accomplishment and achievements; and
8. Competency-based assessment should be used where appropriate.

For Masters and Doctoral Degree **by Research** only:

1. Formative assessment must include:
   i. Monitoring of research progress periodically (for example, through a proposal defense and progress report)

      This will assess candidate's knowledge, critical thinking skills, practical, technical, professional, scientific and problems solving skills, consideration of the ethical aspects of the research endeavor as well as attitudes towards research culture.

   ii. Research presentation/colloquium/seminar/workshop.

      This will enhance candidate's communication skills, teamwork, leadership, organisational skills, lifelong learning and professionalism.

2. Summative assessment is used to assess all learning outcomes of a master's programme, and must include:

i. completion of prescribed courses;
ii. dissertation; and
iii. viva voce (if required by HEP).

3. Summative assessment is used to assess all learning outcomes of a doctoral programme, and must include:
   i. Completion of prescribed courses;
   ii. Thesis; and
   iii. Viva voce.

Suggested breakdown of assessment weightage and percentage for each level of award, from Certificate to Doctoral Degree awards are as given below:

Qualifications	Continuous Assessment (%)	Final Assessment (%)	Suggested Method Required
Certificate	50-70	30-50	• Written Assessment • Practical Assessment • Oral Assessment /Presentation • Internship/Project • Portfolios or e-Portfolios
Diploma	30-70	30-70	• Written Assessment • Practical Assessment • Oral Assessment /Presentation • Internship/Project • Portfolios or e-Portfolios
Bachelor's Degree	40-70	30-60	• Written Assessment • Practical Assessment • Oral Assessment /Presentation • Internship/Field work • Project

Qualifications	Continuous Assessment (%)	Final Assessment (%)	Suggested Method Required
			• Portfolios or e-Portfolios
Post Graduate Certificate	40-70	30-60	• Written Assessment • Oral Assessment /Presentation • Internship • Portfolios or e-Portfolios
Post Graduate Diploma	30-70	30-70	• Written Assessment • Oral Assessment /Presentation • Practicum/Internship • Portfolios or e-Portfolios
Master's Degree by Coursework [Some individual courses can be 100% Coursework]	30-70	30-70	• Written Assessment • Seminar Presentation • Project Paper • Portfolios or e-Portfolios
Master's Degree by Mixed Mode	30-70	30-70	• Written Assessment • Seminar Presentation • Dissertation • Viva Voce (if required by the HEP) • Portfolios or e-Portfolios
Master's Degree by Research	-	-	• Seminar Presentation • Dissertation • Viva Voce (if required by the HEP) • Portfolios or e-Portfolios

Qualifications	Continuous Assessment (%)	Final Assessment (%)	Suggested Method Required
Doctoral Degree by Mixed Mode Doctor of Education	30-70	30-70	• Seminar Presentation • Thesis • Viva Voce • Publications in journals • Portfolios or e-Portfolios
Doctoral Degree by Research	-	-	• Seminar Presentation • Thesis • Viva Voce • Publications in journals • Portfolios or e-Portfolios

In specific cases there may be exceptions regarding assessment protocols and weightage. The guiding principles are that of thoughtful, reasoned flexibility, and, attainment of the learning outcomes, based on professional and academic discretion of the Higher Education Provider. As a general guideline, continuous assessment should not be more than 70%, and the Final Examination should not be more than 70%. However**,** there are courses which can carry 100% Course work and Courses which can carry 100% Final Examinations. Whatever the case, the distribution, credibility, consistency, fairness, objectivity, transparency, clarity of audit tracking, and quality of the assessment must not be compromised. A useful seminal reference for technical information of standards as primary, secondary, conditional and desirable, covering contexts and purposes of test development is the AERA Standards. The Standards cover standards on test construction, evaluation and documentation, fairness in testing, rights and responsibilities of test takers and users, testing applications in program evaluation and public policy. In Educational assessment, distinctions are made among types of tests and assessment, measuring change, stakes of testing, individualized and special needs testing. (American Educational Research Association, et. al. Standards for Educational and Psychological Testing, 2002).

Note:

Composition of dissertation/thesis examiners are as follows:

1. Master's Degree by Mixed Mode

   The dissertation is to be examined by at least two examiners.

2. Master's Degree by Research

   The dissertation is to be examined by at least two examiners, one of whom is an external examiner.

3. Doctoral Degree by Mixed Mode

   The thesis is to be examined by at least two examiners, one of whom is an external examiner.

4. Doctoral Degree by Research

   The Thesis is to be examined by at least three examiners, two of whom are external examiners.

6. STUDENT SELECTION

"One mark of a great educator is the ability to lead students out to new places where even the educator has never been"
~Thomas Groom

This section of the education programme standards concerns the recruitment of students into the individual programme of study. In general, admission policies of the programme need to comply with the established policies of the Malaysian Ministry of Education (MOE).

"There are varying views on the best method of student selection. Whatever the methods used, the Higher Education Provider (HEP) must be able to justify and defend the coherence and consistency of its policies. The number of students to be admitted to the programme is determined by the capacity of the HEP and the number of qualified applicants. HEP admission and retention policies must not be compromised for the sole purpose of maintaining a desired enrolment. If an HEP operates geographically separated campuses or if the programme is a collaborative one, the selection and assignment of all students must be consistent with national policies" (COPPA, 2008, pp.17).

The benchmarked standards for recruitment of students into education programmes are provided below. The Standards are created keeping in mind the generic National Education and National Higher Education Policies pertaining to minimum student entry requirements. Higher Education Providers must take cognisance of and indicate in a transparent manner, any specific policies that may apply to their individual institutions. The entry requirements to all programmes, particularly professional programmes, must be constantly reviewed. The nation's vision of becoming a leader in knowledge generation and contribute to the advancement of contemporary knowledge heritage and contemporary civilization can be more quickly realized when its institutions of higher education admit the very best of well prepared, ready and willing learners with good academic potentialities, to its various faculties and programmes. It is to be noted that as Malaysia develops as the preferred provider of higher education globally, the bar of minimum entry requirements will be raised. In addition, HEPs should continue to take cognisance that teaching [Education] is a profession, and, like all other professions, only those who demonstrate high

predictability to be a significant contributing member to the profession should be admitted. To this end, HEPs can institute other additional requirements beyond minimum entry requirements, to select the most appropriate candidates for their professional programmes. HEPs may even interview their candidates or conduct "challenge examinations" to fine –tune their search for the potentially successful scholar-teacher who would eventually enrich the learning experiences of learners, and, enhance the standards of their education programmes through the contributions of the scholar-teachers themselves.

The minimum standards are as follows:

CERTIFICATE

i. A pass in Sijil Pelajaran Malaysia (SPM) or its equivalent, with a minimum of one (1) credit in any subject;
   OR
ii. A pass in Sijil Kemahiran Malaysia (SKM) level 2 and pass SPM

DIPLOMA

i. A pass in SPM or its equivalent, with a minimum of three (3) credits in any subject;
   OR
ii. A pass in Sijil Tinggi Persekolahan Malaysia (STPM) or its equivalent, with a minimum of Grade C (GP 2.00) in any subject or its equivalent;
   OR
iii. A pass in Sijil Tinggi Agama Malaysia (STAM) with a minimum grade of *Maqbul* or its equivalent;
   OR
iv. A pass in SKM level 3 and pass SPM with one (1) credit;
   OR
v. A Certificate or its equivalent.
   .

BACHELOR'S DEGREE

i. A pass in Sijil Tinggi Persekolahan Malaysia (STPM) or its equivalent, with a minimum of Grade C (GPA 2.00) in any two (2) subjects;
   OR
ii. A pass in Sijil Tinggi Agama Malaysia (STAM) with a minimum grade of *Jayyid* ;
   OR
iii. A Diploma or its equivalent, with a minimum CGPA of 2.00 ;
   OR
iv. Matriculation/Foundation or its equivalent, with a minimum CGPA of 2.00.

POST GRADUATE CERTIFICATE/DIPLOMA

i. A Bachelor's Degree or its equivalent, with a minimum CGPA of 2.50, as accepted by the HEP's Senate;
   OR
ii. A Bachelor's Degree or its equivalent, not meeting CGPA of 2.50, can be accepted subject to a minimum of five (5) years working experience in a relevant field.

MASTER'S DEGREE BY COURSEWORK

i. A Bachelor's Degree or its equivalent, with a minimum CGPA of 2.50, as accepted by the HEP's Senate;
   OR
ii. A Bachelor's Degree or its equivalent, not meeting CGPA of 2.50, can be accepted subject to a minimum of five (5) years working experience in a relevant field.

MASTER'S DEGREE BY MIXED MODE AND BY RESEARCH

i. A Bachelor's Degree or its equivalent, with a minimum CGPA of 2.75, as accepted by the HEP's Senate;
   OR

ii. A Bachelor's Degree or its equivalent, with a minimum CGPA of 2.50 and not meeting CGPA of 2.75, can be accepted subject to rigorous internal assessment;

OR

iii. A Bachelor's Degree or its equivalent, not meeting CGPA of 2.50, can be accepted subject to a minimum of five (5) years working experience in a relevant field.

DOCTORAL DEGREE (BY RESEARCH OR BY MIXED MODE) OR DOCTOR OF EDUCATION DEGREE

i. A Master's Degree, as accepted by the HEP's Senate;

OR

ii. Other qualifications equivalent to a Master's Degree, as accepted by the HEP Senate.

Note for PhD by Research:

i. There shall be no direct entry from Bachelor's Degree level to PhD level.

ii. Candidates registered for Master's Degree programmes with at least CGPA of 3.67 at Bachelor's Degree level may apply to convert their candidacy to the PhD programmes subject to:

   a) having shown competency and capability in conducting research at PhD level.

   b) approval by the HEP's Senate.

7. ACADEMIC STAFF

"It is the supreme art of the teacher to awaken joy in creative expression and knowledge"
~ Albert Einstein

"The quality of the academic staff is one of the most important components in assuring the quality of higher education and thus every effort must be made to establish proper and effective recruitment, service, development and appraisal policies that are conducive to staff productivity" (COPPA, 2008, pp.21).

Malaysia has set the agenda to develop education hubs, in many different geographic locations in the country, and, strategically, strive to become the Centre of Educational Excellence in the Region. In 2010 Malaysia was ranked by *Business Week* as number 11 in terms of foreign student preference, choice and enrolment. Malaysia, has also, for instance, been ranked as the world's 43rd most prosperous nation overall, 8th in Economy and 40th in Education, based on, the Legatum Prosperity Index 2013 (Legatum Institute 2013; www.prosperity.com). Other Indexes provide evidence of somewhat similar trends regarding the progress of the nation. To continue to create, develop and distribute wealth, the nation's human resources, competencies and talents must be continuously developed. The Education sector is the centre of such strategic efforts and agenda. In all domains, measures are taken to raise educational standards, so that Malaysia can be competitive globally. Universities and other educational institutions have set increasingly higher standards of excellence. To this end, Higher Education Providers (HEPs) are expected to make preparations to continuously raise the academic qualifications of the teaching staff so that every academic staff acquires a Masters or a Doctoral Degree. Only in exceptional cases should the HEP use the services of those who have relevant experiences but possess lower academic qualifications. HEPs should formulate and implement a policy of Continuous Professional Development (CPD) for full-time staff according to their specialisation needs, with at least 2 weeks of relevant training per year.

The following sections provide benchmarked requirements of academic staff qualifications in order to be eligible to teach at the various levels of education qualifications.

CERTIFICATE AND DIPLOMA

- Minimum qualifications of Academic staff:
  Bachelor's Degree in relevant or related field; OR

  Diploma in relevant or related fields with 10 years of related working experience, including teaching experience or certified by competent authority. (The programme should not employ more than 20 % of staff in this category)

  There are people in the Vocational and Technical fields of studies who have relevant experiences, and mastery of professional knowledge, but do not have academic qualifications. The Higher Education Providers should establish assessment and evaluation criteria in transparent ways and justify objectively that such experts who are hard to come by, should be duly recognized.

- Overall Staff - Student ratio – 1:20
- Full-time and Part-time faculty – At least 60% are full-time

BACHELOR'S DEGREE

- Minimum qualification of academic staff:
  Master's Degree in relevant or related fields **OR**

  Bachelor's Degree in relevant or related fields with **five** years of related working experience, including teaching experience.
  (The programme should not employ more than 20% of the staff in this category).

- Overall Staff - Student ratio – 1:15
- Full-time and Part-time teaching faculty – At least 60% full-time

MASTER'S DEGREE (by Research or by Mixed Mode and Coursework) /POSTGRADUATE CERTIFICATE & DIPLOMA

- Minimum qualification of academic staff/supervisor:

  Doctoral Degree in relevant or related area**; OR**

  Master's Degree in relevant or related fields with **five** years experience in teaching and research, or as co-supervisor;

  The additional criteria are subjected to the approval of the HEP Senate.

- Supervisor requirement:
  i. When there is one supervisor, the supervisor must be a full-time staff of the conferring HEP
  ii. When there is more than one supervisor, the principal supervisor must be a full-time staff of the conferring HEP.
- Overall Staff - Student ratio – 1:10
- Overall Supervisor - Student ratio 1:10
- Full-time and Part-time teaching faculty – At least 60% of full-time staff/faculty.

DOCTORAL DEGREE (by Research or Mixed Mode)/ Doctor of Education

- Minimum qualification of academic staff:

  Doctoral Degree in relevant or related area with **two** years experience in teaching and research, or as a co-supervisor: **OR**

  Where a staff is without the required qualification, extensive experience in research and supervision are additional criteria and are subject to the approval of the HEP's Senate.
- Overall Staff - Student ratio – 1:10
- Overall Supervisor - Student ratio 1:10
- The Principal Project Supervisor must be a full-time lecturer of the HEP; **OR**
  An Academician from another institution approved by the Faculty or Department or Centre offering the Programme.*

***** Note:

Only under exceptional circumstances, can an Adjunct Professor in the university or an academician from another recognized institution of higher learning or an expert in the field who is not an Adjunct Professor or full-time academician be approved by the Faculty, Department, Centre or Institute to act as the Principal Supervisor. The exceptional case is when the Doctoral Research Problem is a significant aspect of the overall research endeavour of the University, or, part of a multidisciplinary or trans-disciplinary initiative and the university does not have the expertise at that point of decision-making, and /or for some other rationale deemed important to the University.

8. EDUCATIONAL RESOURCES

"Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction, and skillful execution; it represents the wise choice of many alternatives."
~ William A. Foster

"Adequate educational resources are necessary to support the teaching-learning activities of the programme. These resources include finance, expertise, physical infrastructure, information and communications technology, and research facilities. The physical facilities of a programme are largely guided by the needs of the specific field of study" (COPPA, 2008, pp.23).

To support teaching and learning in the Education Programmes, Higher Education Providers [HEPs] must provide sufficient resources as follows:

1. Finance

Budget allocations that are regular and adequate for personnel, physical infrastructure (teaching and learning spaces, and equipment), information and communications technology infostructure, research support, materials, and supplies, all of which could severally or collectively, cumulatively, contribute to sustain the programme.

2. Educational Expertise

Educational experts and specialists who are available, and, used in planning programmes such as designing and reviewing the curriculum, selecting relevant contents, developing teaching and learning methods, advising on the assessment modes, building staff capacity and conducting educational research and providing consultancy services.

3. Physical Infrastructure

Space impacts teaching and learning, whether those spaces are explicitly considered or not (Strange & Banning, 2001). The wider use of new technologies and the exploitation of web-based services in the education sector have their implications for the Teaching and Learning Spaces (TLS) of

the 21st century. If not done so by the HEPs, physical spaces (or "real" TLS) such as traditional classrooms and lecture theatres should be redesigned to accommodate the use of ICT and mobile devices that are integrated to support the teaching learning approaches. In fact, the emergence of online learning, e-learning and mobile learning has revolutionised TLS and driven reconceptualization of educational processes. TLS (especially virtual TLS) are more flexible to cater for personalized learning environments, such as virtual learning environments and such advances require appropriate Content Learning System (CLS) Learning Management Systems (LMS) , including, mobile and immersive learning environments. The use of such innovative protocols and approaches broadens and enriches learning experiences through blended learning approaches (which combine virtual and mobile as well as traditional face-to-face learning experiences), experiential learning, exploratory learning and problem-based learning. Real and virtual TLS can be combined and integrated with new technologies to deliver "seamless" learning experiences. Whatever the types and nature of teaching and learning spaces required of a programme, the HEP must ensure that the TLS are appropriate, safe, adequate, exciting and effective.

Higher Education Providers (HEPs) must ensure the provisions of basic infrastructure as follows:

- Appropriate, safe and adequate physical facilities (lecture rooms, tutorial rooms, science laboratories, computer laboratories, workshops, microteaching rooms, corridor spaces for learning, learning enclaves, and other learning spaces, recreational and sports facilities, academic offices and campus cafeteria wifi, et cet tera.) that comply with relevant laws and regulations, including, caring for the needs of persons with disabilities consistent with the mandates of the Malaysian Persons with Disabilities Act (PWDA) 2008. ICT and infostructure facilities and access should be continuously upgraded and there should be the agenda to keep pace and even lead, with the latest innovations and inventions.
- The HEP should develop and take measures to ensure an ecologically responsible environment, with a keen sense of educational aesthetics and cultural diversity and richness.

- Appropriate security systems must be in place to ensure a safe and secure environment for all.
- Appropriate and up-to-date infostructure must be provided to ensure that every learner citizen has access to technological and digital services.
- There should be appropriate aesthetic elements, indoor and outdoor, which enhance the conduciveness of the physical teaching and learning environments, including, overall cleanliness, (particularly, toilet facilities, cafeteria and community spaces), and proper maintenance of the physical environment benchmarked with the highest international health standards.
- There should be equipment and evolving educational materials that are appropriate, accessible and adequate that meets the required current standards for the programme. Equipment must be maintained in good working order and support services must be in place and be readily available.
- The Higher Education Providers [HEPs] must ensure the availability of schools (such as Teaching Schools, preschools (including *tadika*), child-care centres (including *taska*) and Foster Schools, Experimental Schools, which are suitable for professional practice and, practical training, practicum and internship for school-based experiences for the scholar-teacher learners.

4. Resource Centre and Learning Resources

The HEP must ensure the following provisions for its Resource Centre:

A well-maintained resource centre that is adequate in volume of holdings of seminal and significant works in print and in digital media, and, up-todate information communications technology system be established to support the programme.

Appropriate services that are accessible and effective that include but are not limited to:

i. Reference services;
ii. Providing access (such as indexing, cataloguing, and development of search terms and methodologies) to the resource centre's collection;
iii. Inter-resource centre loans and documents delivery service;

iv. Access to electronic resources and database;

v. Digital/Electronic reference services, direct reference service via email and telephone;

vi. Facilitating instruction to enhance learner's information-seeking skills (e.g. research and bibliographic skills, et cet tera.); and

vii. Programmes and activities that inculcate high ethics and a culture of respect for intellectual property, and, policies which foster the building of legal literacies, and the enculturation, [through established mechanisms] of academic practices curbing and preventing plagiarism.

The resource centre and information services staff must be well trained and be responsive to the needs of the scholar-teacher learners and the requirements of the programme in any particular semester and for the immediate future.

5. Information and Communications Technology

Higher Education Providers should provide Information and Communications Technology (ICT) (infostructure) services that are adequate for both the current programme and for programme changes anticipated in the immediate future. HEPs must provide infrastructure, infostructure and other facilities which include, but are not limited to,

i. Sufficient and suitable up-to-date hardware and software resources and infrastructure to support the teaching, scholarship, research and consultancy services ,and, the administrative needs of the programme;

ii. Sufficient and qualified technical support staff, and, appropriate workspaces; and

iii. Adequate financial resources to adopt and maintain new technologies as appropriate.

iv. HEPs must be supportive of innovations and creative efforts by staff and students, particularly of scholar-teachers in the programme.

6. **Research Facilities**

Higher Education Providers [HEPs] must provide appropriate, safe and adequate facilities (including real and virtual TLS) for their staff and students as they set out to conduct their research initiatives and endeavours. A research-active environment must be supported by relevant policies on research and adequate facilities to sustain initiatives. Staff and learners must engage in research, development, innovation and commercialisation within HEPs and in collaboration with other partner institutions.

7. Publications and Body of Works

HEPs are expected to provide opportunities and incentives for staff and scholar-teachers to publish their works in print and digitally in institutional, national and international journals. The research works of staff and scholar-teachers which constitute the intellectual and academic treasures of the institutions are to be kept in some retrievable modes for reference and use by others.

8. Educational Exchanges

In moving forward, based on the National Educational Blueprint 2013-2025, the National Strategic Plan for Higher Education, and based on their own Strategic Plans, [HEPs] must be prepared to meet the challenges of globalization, liberalization and internationalisation towards the achievement of such goals with a sense of urgency, HEPs are required to internationalize teaching staff and scholar-teacher learners, as well. A potential initiative [with appropriate mechanisms] is for HEPs to create international educational exchange programmes. Developed countries like the United States had started similar efforts in the 1940s by establishing the Fulbright International Educational Exchange Program under the State Department, and through independent bodies such as The Council on International Educational Exchange (CIEE). Other developed countries throughout the world have also implemented such exchanges. Such programmes provide opportunities for learners and the faculty to study in other countries whilst inviting their counterparts in other host countries to study in their institutions.

In the US, Higher Education Providers [HEPs] participated in these projects by becoming members of organisations such as the CIEE. In Malaysia, universities like *Universiti Sains Malaysia* has joined the Commonwealth Universities Study Abroad Consortium, established in 1993, which also includes the participation of universities from other parts of the world. *Universiti Pendidikan Sultan Idris* - UPSI has begun such programmes [as also some other universities.]. All institutions should continue to expand the qualitative as well as the quantitative impact of the programme. Other HEPs can undertake similar initiatives in their own unique ways, mindful of contexts.

HEPs have to continue to initiate and develop partnerships through Memoranda of Understanding (MOU), Memoranda of Agreement (MOA) and other types of cooperative articulations with foreign participating universities. The HEPs can then become hosts to international students and scholars, as well as provide opportunities for their scholar-teachers to study in foreign institutions, and for faculty members to participate as visiting scholars in participating universities. The Exchange Program will allow students to spend one semester, and, up to one year in participating institutions, attending equivalent courses that are acceptable for credit transfers. This process will enable scholar-teachers to participate in the exchange programmes without having to extend the completion time of their own degree programmes. It is noted that many HEPs, including, those in the private sector have already implemented such initiatives during the last several years. There may also be courses with no credit transfers which will nevertheless enhance the scholar-teacher learners' academic, professional, cultural, and life experiences.

Finance for such exchange programmes could be structured under a reciprocal agreement such that students will pay tuition fees to their home institutions and yet have full access to resources provided by host institutions. Full or partial scholarships could be offered to eligible students to help cover their travelling, housing and living expenses in the host country. Students could also participate in the exchange programme through self-funding.

HEPs must have in place an International Student Department that will provide services, which include, but are not limited to:

- Assistance with student visa application before coming to the country and at other times when travelling in and out of Malaysia;
- Orientation programmes to "acclimatize" visiting students to the local environment and culture;
- Assistance with course registration at the beginning of the semester;
- Reception at airports to facilitate students' welcome at ports of entry and departure;
- Engage Liaison officers to help and support visiting scholar-teachers ,students, especially in case of, and, during emergencies;
- Assistance in securing on-campus and off-campus accommodation;
- Organization for appropriate and systematically planned activities to encourage familiarization and empathy with the local culture; and
- Detailed interactive instructions, advice and recommendations on the HEP's website with feedback and evaluation forms.

Under the Faculty Exchange Program, foreign academicians can be invited as Visiting Professors, Lecturers or Scholars to Malaysian universities, Teachers' Education Institutes, and vice versa. Various categories of Visiting Scholars can be involved in teaching courses, collaborating in research, providing consultancy services and giving lectures related to his or her areas of expertise.

HEPs are encouraged to prepare Road Maps regarding Student and Staff Exchanges as an aspect of continuous and sustainable people development and institutional development initiatives. This proactive position taken by the HEPs will foster wider scope of internationalisation and the constructive engagement with significant partners to enhance knowledge sharing activities and collaborate to face the challenges of globalisation.

9. Scholar-Teacher and Student Support Services

HEPs must provide scholar-teacher support services which include, but are not limited to, induction programmes for local and international students, counselling services, health and medical services and students' advisory board [including digital boards] on academic matters. These services should be accessible to all students.

CERTIFICATE, DIPLOMA AND BACHELORS DEGREE

Educational resources to be provided by HEPs according to the various levels are:

- Suitable teaching and learning spaces (with sufficient audio visual facilities and appropriate new technologies) in sufficient numbers, and, of appropriate size to permit reasonable scheduling for all lectures and classes and to provide sufficient opportunities for learners to use such facilities and technologies.
- Sufficient spaces suitable for individual or group study and other forms of collaborative work.
- Specialised laboratories according to the needs of the programme (e.g. Science Laboratories, Workshops and Media rooms).
- Microteaching Rooms and Computer Laboratories or Computer/Cyber/Internet Cafes.
- Resource Centre (including online resources).
- Internet Access (including the latest technologies).
- Preschool and schools for Professional Practice (including for Practicum, Internship, School-Based Experience, *et cetera).*
- Sufficient access to relevant software, hardware, and other materials according to the needs of the students and programme.

POSTGRADUATE CERTIFICATE/DIPLOMA, MASTER AND DOCTORAL DEGREE

- Suitable learning spaces (with sufficient audio visual facilities and appropriate new technologies) in sufficient numbers and size to permit reasonable scheduling for all lectures and classes and to provide sufficient opportunities for learners to use such facilities and technologies.
- Sufficient space suitable for individual or group study and other forms of collaborative work

- Specialised laboratories according to the needs of the programme (e.g. Science Laboratories, Workshops, Domestic Science Rooms, and Media rooms.)
- Resource Centre (including online resources)
- Internet Access (including the latest technologies)
- Research laboratories
- Study, Discussion, and Seminar Rooms
- Relevant specialised software and hardware according to the needs of the programme and students

Overall, HEPs should take the initiative to ensure the ambience of a university is experienced by all, through its presentations of mindscapes, landscapes, interior decorations, use of space, all of which should inspire, and enhance learning, promote high quality of intellectual living and learning..

(Strange, C. C. & Banning, J. H. (2001). *Educating by design: Creating campus learning environments that work*. San Francisco: Jossey Bass)

9. PROGRAMME MONITORING AND REVIEW

In a true zero defect approach, there are no unimportant items.
Quality is the result of a carefully constructed cultural environment. It is to be the fabric of the organization, not part of the fabric"
~ Philip Crosby

The Programme Standards in Education provides Guidelines to HEPs to develop and offer Education Programmes which assure that the quality of provision and standards of quality in the management of education are being safeguarded and enhanced. In order to promote and maintain continuous quality enhancement, and public confidence, the Education Programmes must be regularly reviewed and checked based on robust evaluation and feedback protocols. Such reviews include the monitoring, reviewing and evaluating of institutional structures, governance, processes, policies, procedures, rules, regulations and guidelines. Information derived from evaluation, monitoring and review processes should be used to , improve, develop, shape and assure the positive conduciveness of the teaching and learning environments.

The processes of monitoring, reviewing and evaluating [MRE] can cover all the 9 MQA Areas of Evaluation and can be conducted as cyclical processes or can be focused independently, depending on the particular needs which emerge based on the evidence of feedback. HEPs will need to ensure the practice and process of the culture of excellence are internalized and routinized. MRE may also be conducted as necessary contingency actions when the needs arise.

Monitoring and Review

Processes for monitoring and reviewing Higher Education Providers' academic programmes must be part of the HEP's Quality Assurance Framework. Monitoring and review are also used to help in the selection and design of future programmes. Evaluation studies will assess the extent to which the programmes produced the intended impacts (for example, better academic performance, or increases in student generated creative works and joy of learning, et cet tera.), and the equitable distribution of the benefits between different groups of learners. Such feedback will also help to evaluate the cost-effectiveness of on-going programmes as compared

with other programme options. This type of activity is performed while a programme is being implemented, with the aim of improving the programme design and functioning while in action, as a quality improvement “rolling plan”. It is also an effective way for HEPs to check and rectify shortcomings and take corrective actions in various aspects of their systems in terms of delivery, efficiency, strengths and weaknesses. Monitoring and review are meant to:

- Evaluate the performance of programme outcomes, the quality of learning opportunities and the institutional capacity and management of standards and quality;
- Ensure intense scrutiny and transparency of the processes of academic review through the use of nationally agreed guidelines on criteria and standards, specified by a Qualifications Framework and procedures for quality assurance;
- Report and make available objective and independent information on the reviews.

Note: “Monitoring” refers to semester, term or annual monitoring of courses including significant course components or academic offerings. “Review” refers to course reviews, normally undertaken on a 3 or a 5 year cycle, including reviews of significant course components or academic offerings

Monitoring & Review tools

The following tools are usually applied in the on-going monitoring and review of projects:

- monitoring visits at practicum or simulation sites
- meetings with programme partners and stakeholders
- narrative reporting
- financial reporting
- other monitoring instruments, such as self-reporting instruments.

Narrative reporting

Depending on the programme duration, a report may be in the following format:

- Semi-annual progress report(s). A narrative document focusing on implementation of activities, major achievements, problems faced and solutions found.

- Programme completion report. A report providing an analysis of achievements of programme, including objectives, design, impact and sustainability. It enables identification of noting positive elements and negative aspects to be prevented or overcome, as valuable lessons learned.

Meetings with partners

As follow- through actions to visits at field or site level, there must be regular meetings with programme partners to discuss progress in implementation and obstacles encountered, and to take immediate corrective actions,.

Monitoring, review and evaluation of courses, topics and components of courses are intended to enable the HEPs to:

- assess the overall quality of the teaching and learning environments, and judge whether educational aims and learning outcomes have been achieved;
- identify areas where performance needs to be improved, and generate strategies for improving performance in these areas; and monitor improvements over a given period of time.
- consider the on-going value, viability and sustainability of the course or topic, and its relevance and place within the HEPs academic programmes.
- assess the impact of Content Management System (CMS) and the Learning Management System (LMS) of the HEPs
- identify and assess the direction and trend of official knowledge generated and the community generated and community driven content.

10. LEADERSHIP, GOVERNANCE AND ADMINSTRATION

"*Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for"*
~Peter F. Drucker

"There are many ways of administering an educational institution and the methods of management differ between HEPs. Nevertheless, governance that reflects the leadership of an academic organization must emphasize excellence and scholarship. At the department level, it is crucial that the leadership provides clear guidelines and directions, builds relationships amongst the different constituents based on collegiality and transparency, manages finances and other resources with accountability, forges partnership with significant stakeholders in educational delivery, research and consultancy and dedicates itself towards academic and scholarly endeavours. Whilst formalized arrangements can protect these relationships, they are best developed by a culture of reciprocity, mutuality and open communications" (COPPA, 2008. p28).

Leadership in HEPs does not only concern the leadership of the Head or Chief Executive/Vice Chancellor or top management who ought to have leadership qualities and specific skills, but leaders are also, each and every one of the teaching staff. In academic organizations, the leadership norm is distributed and autonomous, with the primacy of leadership acts placed on academic and thought leadership. In the philosophy of leadership for learning, all staff should be involved as leaders in the programmes offered. Although there is a strong relationship between management and leadership, exploring the management specific roles and responsibilities is prerequisite to understand the nature of leadership. So, it is necessary to examine the roles of the Head as the one appointed to the post, and the roles of the informal leader and other non-positional leaders as well, who possess rare talents and unique expertise. The first role is given, and, it includes legitimate authority and encompasses a wide range of managerial and administrative sub roles which require appropriate skills and capacities. The latter role implies the possession of a variety of specific characteristics, behaviours, attitudes and skills which are exercised in informal and non-formal domains. (Law and Glover, 2000).

Leadership Creates, Promotes and Develops Professional Communities of Practice for the Programme

Academic leadership of any education programme should be based on the standards consistent with responsibilities in the execution of the programme concerned. Successful leadership influence teaching and learning through developing learning communities, which, in this sense is an inclusive group of people, motivated by a shared vision that will enhance and support scholar-teacher and -students' learning (Stoll & Seashore, 2007). It is very important that the selection processes, procedures and criteria of individuals and job description of the academic leaders, are well defined and in place, consistent with the leadership requirements of any particular education programme. The list of names, qualifications and past experiences with accrual resume to indicate the relationship between the academic leaders, courses and responsibilities in the execution of education programme should be provided by the HEP, Faculty or Department concerned for immediate reference as well as for record purposes. The seminal works and contributions of academic staff should be made accessible to peers and students and should be shared to promote multidisciplinary understanding and develop frameworks of collective insights. There is in existence a vast international literature and, an increasing body of works in indigenous literature, in autobiographical and biographical genres on educational leadership. This genre can be used by curriculum developers as well as scholar-teachers to foster deeper and personal understandings of educational leadership, educational philanthropy, and edupreneurship. (Beeby, 1999; Skinner, 1976; 1979; Omar Hashim, 2013; Rokiah Talib 2014). The spin-off on the focus on leadership should inspire a culture of volunteerism and corporate, national, global social responsibility among all, academicians, academic staff, and, particularly, the scholar-teachers.

The evaluation process of the performance of Programme Leadership should be done semesterly or annually, and must be transparent or be made known to those who are involved in the evaluation process, whose responsibilities should be clearly indicated. The department leadership should provide opportunities for different academicians to be exposed to the routines as well as the non-routine challenges of recruitment and training, student admission, allocation of resources, as well as other strategic decision making processes. The opportunities for staff development should

be created for new academic staff to generate innovations, and, further advance a culture of creativity in the department, where the policies of job rotation, job enlargement and job enrichment are implemented as appropriate.

The Role of Governance in Sustaining and Spreading Continuous Educational Reform

Effective leadership aims to sustain any educational reform needed by the country or profession and to develop multiple means to spread the substance and spirit of reform, so that parents and educational agencies and the community at large are engaged in ways that address their hopes and aspirations for the best of quality education for their children. There is evidence of effective leadership when the policies, accreditation protocols, autonomy, teaching and administrative practices at the faculty and department levels are established and clearly stipulated, are accessible to all members of the academic staff and non-academic staff, and, are congruent to, and, consistent with the mission, vision and goals of the faculty and with the larger purposes of the HEP.

The governance structure and functions of each department and the main decision making units, as well as other components of the department that provides the programme and their operational and strategic relationships should be articulated and coordinated. There should be evidence to support the coordination and articulation of the programmes provided, such as, faculty and department meetings, admission and examination policies, policy and guideline manuals, and the establishment of administration committees and teams. It is the task of the HEP, the department or the faculty to explain further the role of academic staff, non-academic staff and student‘s affairs in the governance structure. It is noted that in some cases, the leadership responsibilities may extend to other campuses or other institutions with actual, mutual partnership to provide joint education programmes. It is very important that in cases of partnerships, leaders have to comprehend, develop consensual understanding, and, utilize the extent of autonomy and responsibilities given to campuses or institutions based on functional integration and educational quality.

Academic leadership must be dynamic and progressive in undertaking projects, studies, or programmes which are relevant for the training and career advancement

of all staff. It is known, that the department which conducts regular performance review of its programmes will be the department at the leading edge and capable of fulfilling the specific and future needs of the education programmes. All policies regarding the academic records of teaching personnel and administrators must be congruent to and in alignment with Programme Standards set. Programme leaders at the departmental level should master and comprehend fully all policies pertaining to scholar-teachers'/students' academic records, and how the records are kept, retained, used and disposed. Such records should contain data and profiles of scholar-teachers/students for purposes of writing reference or recommendation letters. The department must review and evaluate its policies periodically to ensure the security of records. In so doing, leaders at the departmental level are expected to emphasize the highest standards in confidentiality, quality control and monitoring of students' academic records (Data Privacy Act 2010). Only people of high integrity and trust with some years of working experience in an examination syndicate or examination unit or other security and confidential sections, should be selected for the job of keeping student records with integrity.

Appointment of Efficient and Creative Academic Leaders

The model of academic leadership for Education Programme is based on supportive and "distributed" academic leadership qualities that bring impact to student learning outcomes. Effective leadership demands the appropriate matching of expertise and experience to a particular academic position. As noted earlier, specific to the level offered at HEP, the programme leadership (e.g. Coordinator, Head of Program or Dean) must fulfil the following qualifications and experiences:

CERTIFICATE & DIPLOMA LEVEL

A Bachelor's Degree in Education or related areas with **three** years of related working experiences, including teaching experience.

BACHELOR DEGREE LEVEL

A Master's Degree with at least one qualification in education or related areas with **three** years of related working experiences, including teaching experience.

MASTERS DEGREE AND POST GRADUATE DIPLOMA/CERTIFICATE LEVEL

A Doctoral Degree with at least one qualification in education or related area with **three** years of related working experiences, including teaching experience; **OR**

A Master's Degree with at least one qualification in education or related area with **five** years of related working experience including teaching experience.

DOCTORAL DEGREE

A Doctoral Degree with at least one qualification in education or related area with **three** years of related working experiences, including teaching experience; **OR**

A Master's Degree with **seven** years of related working experiences, including teaching experience and active research publications background.

11. CONTINUAL QUALITY IMPROVEMENT

Quality begins with the intent, which is fixed by management. Everybody doing his best is not the answer. It is first necessary that people know what to do. Learning is not necessary…neither is survival.
~Edwards Deming.

Continual Quality Improvement (CQI) is based on the philosophy of sustainable quality culture, which requires an organization to systematically analyse its systems for variance and make positive quality changes based on facts and other evidence. These improvement changes are meant to increase the organization's effectiveness, efficiency, quality and impact. Positive feedback confirm and reaffirm the organization's policies and objectives , and, initiatives taken to raise quality culture to the next level of excellence in its resolve to provide better customer and employee satisfaction.

"Increasingly, society demands greater accountability from HEPs. Needs are constantly changing because of the advancements in science and technology, and the explosive growth in global knowledge, which are rapidly and widely disseminated. In facing these challenges, HEPs have little choice but to become dynamic learning organisations that need to continually and systematically review and monitor the various issues so as to meet the demands of the constantly changing environment" (COPPA, 2008, pp.30-31).

Continuous Quality Improvements (CQI) in Academia

CQI is closely related to and encompass the Processes of Monitoring and Review. CQI is especially important in institutions of higher education because in the education sector, colleges and universities are held accountable for the products they produce – that is, their graduates. Stakeholders view scholar-teacher achievement and demonstrated performance in the work place and leadership in the wider community, as the key indicator of an institution's quality. Therefore, staff and scholar-teacher become the focus and the means by which an institution gains feedback about what works and what does not work. The challenge is to do what institutions already do, but better. In this respect, CQI is a process - *continual* in

nature – of bringing about *incremental and developmental* improvement for the benefit of its students and staff, customers and stakeholders. It must, however, be remembered that improvement is a result; so it can only be said to be so after there has been a beneficial change in the organization's performance. Such evidence of improvement is important because in this era which is constantly filled with exponentially exploding knowledge bases, rising expectations and aspirations, there will be greater public scrutiny on institutions of higher learning and they are expected to provide proof of their ability to keep pace with rapid changes.

CQI Protocols

CQI is carried out by an institution to assure its stakeholders of an ever-improving value of what it offers. CQI will help improve the institution's organisational efficiency, effectiveness and capabilities. Evidence of sustained quality and excellence will in turn contribute to its market success or its public accountability. At the same time, it will help improve its organisational efficiency, effectiveness and capabilities and also build its own organisational/institutional and personal learning, branding, positioning, image and reputation.

Before embarking on a CQI endeavour, a Higher Education Provider might do the following:

- ask some questions why continual improvement is important and whether it is understood and shared by all members in the organization.
- determine what its continual improvement process is like and what type of trend data it has gathered over the past 5 years or so and how the data was used to bring about improvements to Education Programmes.
- determine how such data was collected and how it will be used in relation to the further enhancement of CQI activity.
- Decide on what improvements to be made to existing instruments and what new relevant data to collect for future use.

Having determined the above, HEPs are expected to provide evidence of ability to keep pace with changes in the field to meet the Standards of the Profession and to meet the requirements of stakeholders. Evidence that the Standards and

Requirements are met should be based on but not limited to the following indicators:

1. Programme curriculum review, and Module review and development, conducted at least once every **2-3 years**;
2. Appointment of external reviewer/industrial adviser for quality assessment processes;
3. Linkages with educational institution, department and industry, such as, with Content Providers, Research Centres and Centres of Excellence;
4. Continuous review of professional policies and practices, attachment practices and systematic records;
5. Dialogue sessions with stakeholders , for example, parent-teacher association, teacher trade unions, and, professional organisations (including, *Majlis Guru Besar*, Deans Council,Professorial Council, and Master Teachers' Council), Ministry and Government agencies, communities, alumni, public opinion leaders and student bodies in order to ensure relevance and effectiveness of educational programmes;
6. Organising symposium and fora as well as active participation of academic staff at relevant national and international conferences, seminars, workshops and short courses;
7. Initiating the expansion of the body of up-to-date educational knowledge by inviting a wide range of national and international speakers from education, training and related fields to share their experiences and indicate trends of the future;
8. Demonstrating evidence of constructive engagement of educators in leadership in teaching, in significant publications, in high impact research, in relevant consultancies and in meaningful community services;
9. The HEP should be continuously reviewing all aspects of it strategic mission and continue to monitor the implementation of strategic plans and make appropriate changes as the national and international drivers and changes such as General Agreement of Tariffs and Trade (GATT), and other international initiatives move beyond the Millennium Development Goals (MDGs) , Education for Alll (EFA), the 11th Malaysian Plan, Vision 2020; and Education Development Blueprint 2013-2025; and

10. The HEP should be addressing gender issues, the needs of minorities, disadvantaged groups especially the handicapped, through infrastructure and facility resources development, appropriate supportive and health services, opportunities development and other practical initiatives, upholding non discriminatory principles.

The success of any CQI activity relies on clarity of philosophies and beliefs, leadership and teamwork and shared commitment. Managers must support their unit strategically and developmentally at the macro level. At the micro level, teamwork is equally important as everyone must work to achieve the goal(s) of the institution. Different departments in the HEP must support and complement the institution's policies, procedures and mechanisms for the CQI agenda. The departments and the HEPs must embrace the spirit of CQI through their involvement in research, revising and reviewing current policies and practices and future possibilities of quality excellence. To ensure strategic and operational goals are met and achieved, the persons or unit responsible for internal quality audit should be given resources as well as other useful kinds of support and recognition.

CONCLUSION

"The empires of the future are the empires of the mind."
~Winston Churchill

Challenges of Global, National and Institutional Realities Ahead

In summary, it is reemphasized that Education is a critical sector and Teacher Education and the Teaching profession is considered the Profession "upon which all other Professions rest." Education is a broad-based multidisciplinary discipline which draws its corpus from a range of Foundation Disciplines which include Psychology, Philosophy, Sociology, History, Anthropology, Curriculum Studies, Linguistics, Social and Policy Studies, Management and Leadership Studies and other Knowledge disciplines. In Teacher Education, various School Subjects are selected for mastery by Scholar-Teachers /pre service and in service teachers. Typically, the Education Sciences and Teacher Education Programmes encompass Teaching Methodologies and the Contents of Academic subjects such as Language[s], Mathematics, Physics, Chemistry, Biology, History, Geography, Religious Studies, and Moral Education, as well as Vocational and Technical Subjects. Education Sciences and Teacher Education may be connected with many other degree programmes. Most competences (generic and specific) are common to both Teacher Education and Education Sciences. Beginning and advanced competencies are to be developed across the first, second and third cycles of studies across the continuum of the personal and professional life of an educator. It is noted that while Faculties of Education of Universities and the Education University (UPSI) focus on the academic aspects of Educational Programmes, Teacher Education Institutes allocated substantial time for practical and co-curricular activities in the education and training of teacher-scholar learners. Many of the expanded competencies for the profession may be acquired and developed during periods of in service education and training, and not necessarily acquired and developed in the contexts of formally accredited programmes leading to the granting of degrees. Policy decisions and professional decisions need to be made to create, develop and establish pathways where all professional learnings are appropriately recognized and duly accredited. **(See Appendix 8)**

In Malaysia, as in most developed countries, all secondary school teachers and increasingly, all primary school teachers are educated at least to first degree level or the equivalent of the level. There is a long history of curricular components and standards of achievements set, based on guidelines by the Ministry of Education, Universities and other authoritative professional bodies. These institutions ensure a commonality of Shared Root Knowledge and Standards of Programmes, although there may be a diverse range of Programmes. While the providers of education for teachers [universities and teacher institutes] have their own autonomy, there is academic and professional consensus that future teachers are to acquire relevant, robust and useable competencies, including knowledge, skills and attitudes, particular to their socio-cultural-economic and technological contexts. The knowledge corpus to be mastered include school subject specializations [including vocational and technical subjects], theory and practice of education relevant to a particular age group, as well as across the life span, educational issues and other matters of national priorities in education, and, regional and global trends and agenda in education. Teachers are, of course, expected to be engaged in defining and deeply understanding their roles as professionals in the fast changing global and national contexts. Besides degree programmes, most institutions provide education professionals with training programmes, which do not always lead to higher qualifications. In Malaysia, Education is a Federal Government responsibility and there is a centralized system of administration, and, therefore, there is considerable uniformity in Education Sciences offered by Higher Educational Providers. Also, because teaching is a profession, there is similarity in common core content and focus of core components of Education Sciences. World-wide there are intellectually rigorous studies of educational approaches, processes and systems in Teacher Education institutions. Collectively these studies contribute to the cumulatively evolving body of knowledge of the Education Disciplines.

As a multidisciplinary discipline, the Educational Sciences and Teacher Education must keep pace with, and, respond to the Knowledge Revolution in the Digital Era, with Scientific, Technological, Economic and Cultural changes which continue to impact on life styles and world views in subtle, and, sometimes in turbulent ways. The design and delivery of the curriculum of Educational Sciences and Teacher Education have to always take cognizance of, be up to date with the enhanced professional demands of the times and, even be ahead in ensuring that Educational Professionals

are in all ways possible, masterful in proactively defining and contributing to solve global and national educational issues of the era.

Scholars have noted that Education confronts new Challenges some of which bring about Turning Points and Paradigm Changes in the ways we understand the world. As Educators contribute to assist in constructing and reconstructing learners' understanding of realities and capture the corpus of knowledge to be transmitted as Wisdom for the next generation, they have to take cognizance of recurring and emerging challenges at the local, national, regional and global levels.

As leaders design the best programmes and courses for those who would be scholar-teachers or those who would acquire qualifications related to the education field, they should take stock of the existing mature knowledge as yet not effectively utilized, as well as, the evolving knowledge yet unknown regarding the future of society, schools and sciences and technologies. In knowledge management in the education sciences in the digital era, special attention should be given to the issue of knowledge obsolescence, brain-sciences, massive open online courses (MOOCs), creativity and innovation, indigenous knowledge, habits of mind and high order cognitive competencies, clarification of values, and stages of moral and ethical growth, multidisciplinarity, and multiculturalism and community-driven knowledge generation [as differentiated from crowd sourcing]. The nurturing of global citizenry, volunteerism, reflective thinking and focus on the genre of autobiographies and biographies in education in the quest for role models should be addressed. It is hoped that immersion by HEPs in this EPS will nurture tough and dynamic leadership in education, promote lifelong learning and encourage scholar teachers to develop lifetime reading and education plans and educational connoisseurship.

HEPs are encouraged to address the important aspects of cross-cultural existence. This matter demands urgency because of globalisation, internationalisation, and liberalisation in a context of greater mobility and interactions of peoples, HEPS and educators are also invited to be mindfully, creatively and contributively engaged in the exciting journey of nation building and civilization building through the Education Sector, and specifically, through dynamic and effective Knowledge Generation, Knowledge Management and Knowledge Dissemination of Education Programmes.

Note:

The Panel records its indebtedness to scholars in the field and those who have made significant earlier contributions pertaining to Standards and Quality in the field of Education.

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Appendix 1

SAMPLE OF EXISTING NOMENCLATURES

Broad Field	Education	
Narrow Field	14	Teacher Training and Education Science
Detailed Field	141	Teaching and Training

Certificate
Certificate in Teaching
Professional Certificate in Teaching Methodology
Diploma in Montessori Method of Education in collaboration with Modern Montessori International, London

Diploma
Diploma Pendidikan
Diploma Perguruan Asas
Diploma Pengurusan Teknik & Pendidikan

Graduate Certificate/Diploma
Graduate Certificate in Tertiary Teaching and Learning

Degree
Sarjana Muda Pendidikan (Pentadbiran Pendidikan)
Sarjana Muda Keguruan (Kajian Sosial)
Sarjana Muda Keguruan (Pendidikan Seni Visual)
Sarjana Muda Pentadbiran Pendidikan
Sarjana Muda Keguruan (Pendidikan Muzik)
Sarjana Muda Keguruan (Pendidikan Jasmani)
Sarjana Muda Keguruan (Pendidikan Khas)
Bachelor of Education(Hons) in Primary Education
Bachelor of Education (Hons)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Bahasa Melayu Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Pendidikan Jasmani Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Matematik Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Sains Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Pendidikan Khas - Masalah Pendengaran Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Pendidikan Seni Visual Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Pendidikan Khas - Masalah Pembelajaran Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Pendidikan Muzik Pendidikan Rendah)

Ijazah Sarjana Muda Perguruan Dengan Kepujian (Pengajian Sosial Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Sains Pendidikan Rendah) Ijazah Sarjana Muda Perguruan Dengan Kepujian (Rekabentuk Dan Teknologi-Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Bahasa Cina Pendidikan Rendah)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Bahasa Arab Pendidikan Rendah))
Ijazah Sarjana Muda Pengajaran Bahasa Inggeris Sebagai Bahasa Kedua
Ijazah Sarjana Muda Pendidikan (PBISBK) Pendidikan Rendah
Ijazah Sarjana Muda Pengurusan Pendidikan Sekolah Rendah
Ijazah Sarjana Muda Kaunseling
Ijazah Sarjana Muda Pendidikan Awal Kanak-Kanak

Post Graduate Certificate/Diploma
Postgraduate Diploma in Education
Post- Graduate Diploma in Higher Education Teaching
Post Graduate Diploma in Teaching

Master Degree
Sarjana Pendidikan
Sarjana Pengurusan Pendidikan
Sarjana Teknologi Pengajaran
Sarjana Pendidikan Matematik Dengan Teknologi Komunikasi dan Maklumat
Sarjana Pendidikan Sains Dengan Teknologi Komunikasi dan Maklumat
Sarjana Pendidikan Awal Kanak-Kanak
Sarjana Pengurusan Pendidikan (Disiplin Sekolah)
Sarjana Pendidikan (Pengurusan Kokurikulum & Sukan)
Ijazah Sarjana Pendidikan (Pengurusan Disiplin)
Sarjana Pendidikan (Pengurusan Pendidikan)
Ijazah Sarjana Pendidikan (Kepengetuaan)
Ijazah Sarjana Pendidikan (Pengurusan Latihan)
Ijazah Sarjana Pendidikan (Pengurusan Kurikulum)
Ijazah Sarjana Pendidikan (Pengurusan Perpustakaan dan Pusat Sumber Pendidikan)
Ijazah Sarjana Pendidikan (Pengukuran & Penilaian)
Master of Education (Educational Leadership and Management)
Master of Education (Curriculum and Instruction)
Master of Education (Counselling)
MA in Educational Leadership and Management
MA in Professional Studies in Education

Doctoral Degree
Doktor Falsafah (Pendidikan)
PhD (with Study in School of Education)

Broad Field	Education	
Narrow Field	14	Teacher Training and Education Science
Detailed Field	142	Education Science

Degree
Sarjana Muda Pendidikan Kejuruteraan Mekanik
Sarjana Muda Pendidikan (Kejuruteraan Elektrik)
Sarjana Muda Pendidikan (Kejuruteraan Awam)
Sarjana Muda Pendidikan (Sains)
Sarjana Muda Pendidikan (Matematik)

Master Degree
Sarjana Rekabentuk Pengajaran dan Teknologi
MA in ICT in Education

Broad Field	Education	
Narrow Field	14	Teacher Training and Education Science
Detailed Field	143	Training for Preschool Teachers

Certificate
Certificate in Pre-School Education
Sijil Pengurusan Prasekolah
Certificate in Early Childhood Education
Sijil Pendidikan Awal Kanak-Kanak
Certificate in Early Childhood Care and Education
Montessori Early Childhood Diploma
International Diploma in Montessori Pedagogy Early Childhood Course

Diploma
Diploma in Early Childhood Education
Diploma in Islamic Early Childhood Education
Diploma in Early Childhood Development
Diploma Pendidikan Pra Sekolah

Degree
Bachelor of Early Childhood 3+0 in collaboration with University of Southern Queensland, Australia
B.A (Hons) in Education Studies (Early Years)3+0 in collaboration with University of Hertfordshire
Bachelor of Early Childhood Education (Honours)
Sarjana Muda Pendidikan Awal Kanak-Kanak
Sarjana Muda Pengajaran (Pendidikan Prasekolah)
Sarjana Muda Pengajaran (Pendidikan Rendah)
Ijazah Sarjana Muda Pendidikan (Pendidikan Awal Kanak-Kanak)
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Pendidikan Pra Sekolah)

Master Degree
Master of Education (Early Childhood Education)

Broad Field	Education	
Narrow Field	14	Teacher Training and Education Science
Detailed Field	144	Training for Teachers at Basic Levels

Diploma
Diploma *Perguruan Teaching of English a Second Language*
Diploma in Education

Degree
Bachelor of Education (*Teaching of English as Second Language* -TESL)
Ijazah Sarjana Muda Industri Pendidikan (TESL)
Bachelor of Arts(Hons)English Education
Bachelor of Arts(Hons) in Education and English
Ijazah Sarjana Muda Perguruan Dengan Kepujian (Bahasa Melayu Pendidikan Rendah)

Master Degree
Master of Education (TESL)

Appendix 2

COMPARISON OF QUALITY CONTROL AND QUALITY ENHANCEMENT

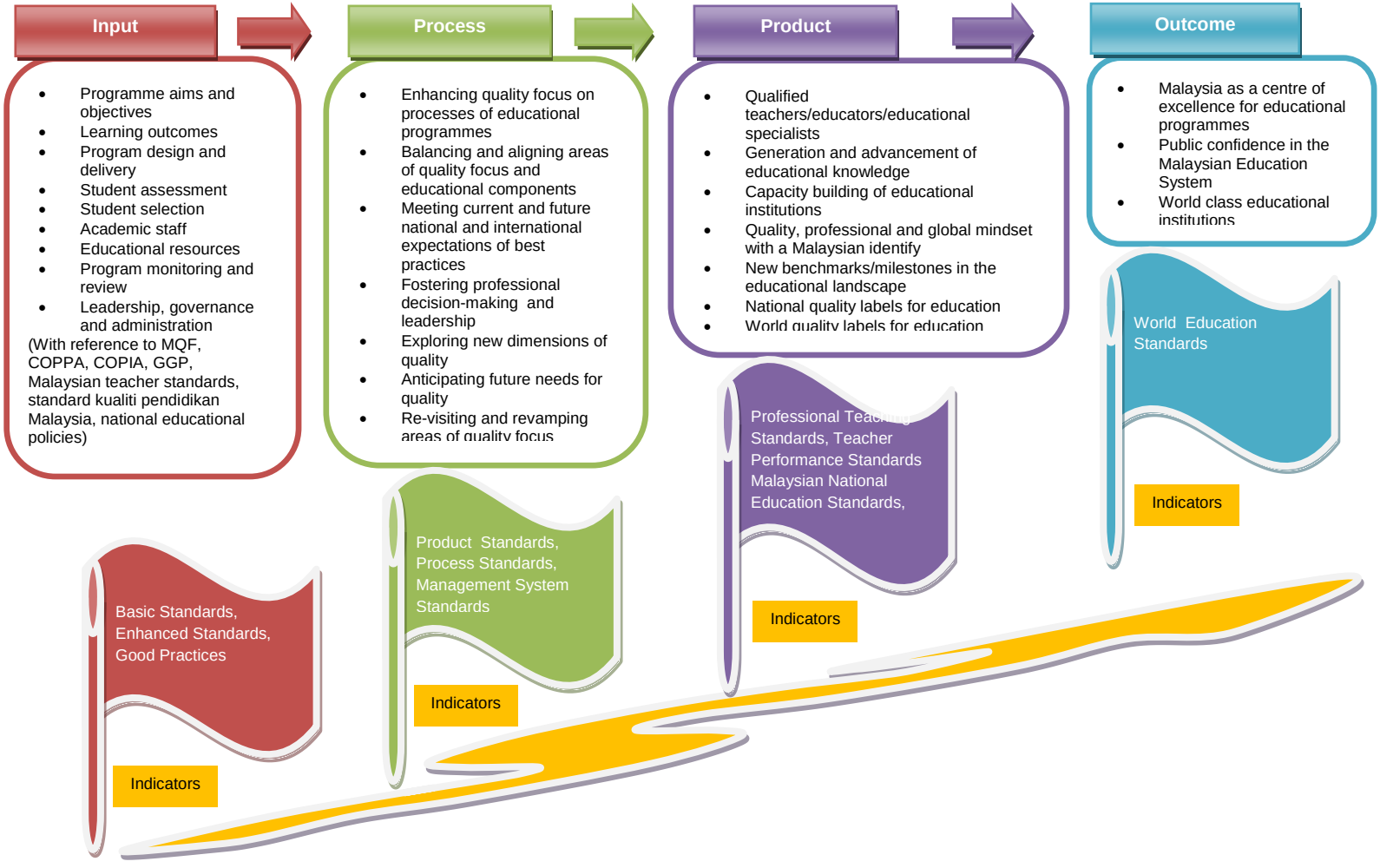
Dimension	Quality Control	Quality Enhancement
Paradigm	Instrumental	Transformative (Driven by all staff & student)
Intent	Accountability	Improvement
Philosophy	Instrumental	Transformative(Driven by enhanced student learning experiences)
Locus of Control	External Management/Government Driven	Internal Driven By Employees/Professionals
Motive	Government Directives/Policies	Desire for Organization's improvement
Social Relations	Competitive, directive	Collegial, negotiated (Collegial and managerial)
Process	Top down / bureaucratic	Bottom up/ facilitative (Multi-directional)
Management Style	Authoritarian	Consensual and (Focused)
Administrative Structures	Centralised	Devolved/Decentralized
Outcomes	Evidence of Past Practice	Pathways for improvement
Time	Short –Term	Longer –Term
Audience	External Stakeholder	Internal Stakeholders (All Stakeholders)
Orientation	Past practice	Future /Possibility
Indicators of Success	Quantitative	Qualitative (Quantitative & Qualitative)

Source: Sachs, J., Dempster, N. & Gapp, R, *A case of Competing Interests: Quality in Higher Education*, Griffith University, Queensland, **http://www.aare.edu.au/93pap/sachj93188.txt**Accessed 17th October 2007.

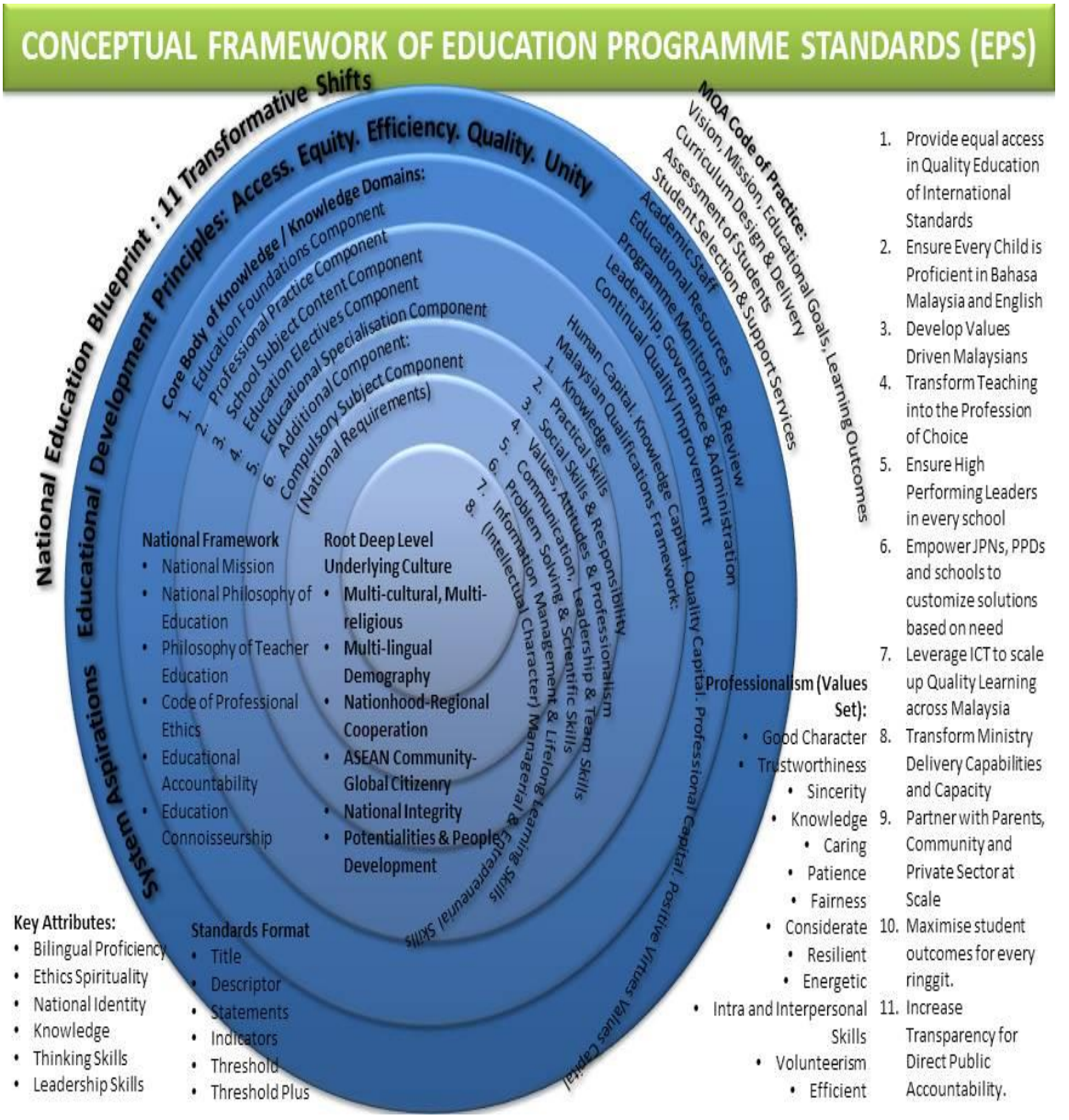
Note: Statements indicated in brackets in the Quality Enhancement Column is reflective of the practice adopted by MQA

Appendix 3

FLOW CHART of DIMENSIONS OF PROGRAMME



Appendix 4


CONCEPTUAL FRAMEWORK OF EDUCATION PROGRAMME STANDARDS (EPS)
National Education Blueprint : 11 Transformative Shifts
Educational Development Principles: Access. Equity. Efficiency. Quality. Unity
System Aspirations
MQA Code of Practice:
Vision, Mission, Educational Goals, Learning Outcomes
Curriculum Design & Delivery
Assessment of Students
Student Selection & Support Services
Academic Staff
Educational Resources
Programme Monitoring & Review
Leadership, Governance & Administration
Continual Quality Improvement
Core Body of Knowledge / Knowledge Domains:
1. Education Foundations Component
2. Professional Practice Component
3. School Subject Content Component
4. Education Electives Component
5. Educational Specialisation Component
6. Additional Component:
Compulsory Subject Component
(National Requirements)
Human Capital, Knowledge Capital: Quality Capital. Professional Capital. Positive Virtues Values Capital
Malaysian Qualifications Framework:
1. Knowledge
2. Practical Skills
3. Social Skills & Responsibility
4. Values, Attitudes & Professionalism
5. Communication, Leadership & Team Skills
6. Problem Solving & Scientific Skills
7. Information Management & Lifelong Learning Skills
8. (Intellectual Character) Managerial & Entrepreneurial skills
National Framework
• National Mission
• National Philosophy of Education
• Philosophy of Teacher Education
• Code of Professional Ethics
• Educational Accountability
• Education Connoisseurship
Root Deep Level Underlying Culture
• Multi-cultural, Multi-religious
• Multi-lingual Demography
• Nationhood-Regional Cooperation
• ASEAN Community-Global Citizenry
• National Integrity
• Potentialities & People Development
Professionalism (Values Set):
• Good Character
• Trustworthiness
• Sincerity
• Knowledge
• Caring
• Patience
• Fairness
• Considerate
• Resilient
• Energetic
• Intra and Interpersonal Skills
• Volunteerism
• Efficient
Key Attributes:
• Bilingual Proficiency
• Ethics Spirituality
• National Identity
• Knowledge
• Thinking Skills
• Leadership Skills
Standards Format
• Title
• Descriptor
• Statements
• Indicators
• Threshold
• Threshold Plus
1. Provide equal access in Quality Education of International Standards
2. Ensure Every Child is Proficient in Bahasa Malaysia and English
3. Develop Values Driven Malaysians
4. Transform Teaching into the Profession of Choice
5. Ensure High Performing Leaders in every school
6. Empower JPNs, PPDs and schools to customize solutions based on need
7. Leverage ICT to scale up Quality Learning across Malaysia
8. Transform Ministry Delivery Capabilities and Capacity
9. Partner with Parents, Community and Private Sector at Scale
10. Maximise student outcomes for every ringgit.
11. Increase Transparency for Direct Public Accountability.

Appendix 5

SCHOOL SUBJECTS IN MALAYSIA BY LEVELS

UJIAN PENILAIAN SEKOLAH RENDAH (UPSR)	PENILAIAN MENENGAH RENDAH (PMR)	SIJIL PELAJARAN MALAYSIA (SPM)	SIJIL TINGGI PELAJARAN MALAYSIA (STPM)
Bahasa Malaysia Pemahaman (Comprehension), Bahasa Malaysia Penulisan(Writing), Bahasa Inggeris (Comprehension & Writing) Bahasa Cina Pemahaman (Comprehension), Bahasa Cina Penulisan (Writing), Bahasa Tamil Pemahaman (Comprehension), Bahasa Tamil Penulisan (Writing), Mathematics, Science and Aptitude Test	Bahasa Malaysia, Bahasa Inggeris, Mathematics, Science, Geography,History, Kemahiran Hidup, Islamic Studies, Moral Education, Physical Education, Art Education, Tamil Language, Chinese Language, Optional Subjects: Basic Arabic Communication, Higher Arabic Communication, Tamil Language,Punjabi Language, Iban Language, and	Bahasa Malaysia, Bahasa Inggeris, Pendidikan Islam, Pendidikan Moral, Modern Mathematics, Additional Mathematics, Chemistry, Prinsip Perakaunan, Physics, Sejarah, Elective Subjects Science and Mathematics - Additional Mathematics, Physics, Chemistry, Biology, Additional Science, Applied Science. Invention and Design, Art Education Social Sciences and Religion - Geografi, Pengajian Keusahawanan, Perdagangan, Prinsip Perakaunan, Ekonomi Asas, Tasawwur Islam, Pendidikan Al Quran dan As-Sunnah, Pendidikan Syariah Islamiah, Perakaunan Perniagaan and Bible Knowledge Arts and Health Science - Pendidikan Seni Visual, Pendidikan Muzik, Pengetahuan Sains Sukan Information Technology - Information Communications	General Studies, Malay Language, Chinese Language Arabic Language, Tamil Language, Literature in English, Malay Literature, Islamic Law, Usulluddin, History , Geography, Economics, Business Studies, Accounting, Mathematics S, Mathematics T, Further Mathematics T, Computing, Physics, Chemistry, Biology, Sports Science, and Visual Arts

UJIAN PENILAIAN SEKOLAH RENDAH (UPSR)	PENILAIAN MENENGAH RENDAH (PMR)	SIJIL PELAJARAN MALAYSIA (SPM)	SIJIL TINGGI PELAJARAN MALAYSIA (STPM)
	Kadazandusun Language,	Technology, Fundamentals of Programming, Programming and Development Tools, Aplikasi Komputer dalam Perniagaan and Teknologi Pejabat Perniagaan	
The UPSR is planned to be replaced by School Based Assessment in 2014	PMR was officially ended in 2013 and is to be replaced by School-Based Assessment.	Language and Literature - Literature in English, Kesusasteraan Melayu, Bahasa Arab Tinggi, Bahasa Cina, Bahasa Tamil, English for Science and Technology, Bahasa Iban, Bahasa Arab Komunikasi, Kesusasteraan Cina, Kesusasteraan Tamil, Bahasa Perancis, and Bahasa Punjabi	
The subjects offered in the education system are to remain.	The subjects offered in the education system are to remain	Technical and Vocational - Sains Pertanian, Pengajian Agroteknologi, Ekonomi Rumahtangga, Engineering Drawing, Pengajian Kejuruteraan Mekanikal, Pengajian Kejuruteraan Awam, Pengajian Kejuruteraan Elektrik dan Elektronik, Rekacipta, Engineering Technology, Pengurusan Makanan, Pola Pakaian [Fashion Design], Pembinaan Domestik, Membuat Perabot, Kerja Paip Domestik, Pendawaian Domestik, Kimpalan Arka dan Gas, Menservis Automobil,Menservis Motosikal, Menservis Peralatan Penyejukan dan Penyaman Udara, Menservis Peralatan Elektrik Domestik, Rekaan dan Jahitan Pakaian, Katering dan Penyajian, Pemprosesan Makanan, Penjagaan Muka dan Dandanan Rambut, Asuhan dan Pendidikan Awal Kanak-Kanak, Gerontologi Asas dan Perkhidmatan Geriatrik, Lanskap dan Nurseri, Akuakultur dan Haiwan Rekreasi, Tanaman Makanan, Seni Reka Tanda, Hiasan Dalaman Asas, Produksi Multimedia Grafik Berkomputer, Membuat Pakaian, Menservis TV, Roti dan Masakan Yis, Patisserie, Persolekan, Dandanan Rambut, Pengajian	

UJIAN PENILAIAN SEKOLAH RENDAH (UPSR)	PENILAIAN MENENGAH RENDAH (PMR)	SIJIL PELAJARAN MALAYSIA (SPM)	SIJIL TINGGI PELAJARAN MALAYSIA (STPM)
		Perkembangan Kanak-Kanak, Perkhidmatan Awal Kanak-Kanak, Penyediaan Masakan Barat dan Timur, Penyajian Makanan dan Minuman, Teknologi Bengkel Mesin, Kerja Menggegas [Maintenance Work], Kerja Melarik [Lathe Working], Lukisan Geometrik dan Mesin, Teknologi Binaan Bangunan, Kerja Kayu, Kerja Bata, Lukisan Geometri dan Pembinaan Bangunan, Teknologi Elektrik, Pemasangan Elektrik, Kawalan Elektrik, Lukisan Geometri dan Elektrik, Teknologi Elektrik, Menservis Radio, Teknologi Kimpalan dan Fabrikasi Logam, Kerja Kimpalan Arka, Kerja Kimpalan, Lukisan Geometri dan Fabrikasi Logam, Teknologi Automotif, Auto Asas, Kerja Elektrik dan Diesel, Lukisan Geometri dan Automotif, Teknologi Penyejukan dan Penyamanan Udara, Memasang dan Menservis Penyejuk dan Penyaman Udara, Lukisan Geometri dan Penyaman Udara, Pengeluaran Tanaman, Pengeluaran Ternakan, Hortikultur Hiasan dan Lanskap, Kejenteraan Ladang dan Pengurusan Ladang	

Appendix 6

AREAS OF STUDY IN EDUCATIONAL PROGRAMMES

Recognizing that education involves a wide range of fields and teacher education covers an entire span of a teacher's career, the programmes in education should focus on both the education of teachers and education discipline sciences.First, teacher education provides scholar-teachers, with essential core educational knowledge and professional teaching knowledge and skills in specific school subject knowledge disciplines. Second, in addition to teaching skills for specific school subjects, education science aims to prepare scholar teachers with a high level of teacher professionalism, knowledge, and understanding to enable them to function as effective professional teachers.

Teacher training and education science in Malaysia can be categorized into several levels, namely, certificate, diploma, bachelor, master's, and doctoral degrees. At each level, educational programmes are divided into core and elective modules and compulsory subjects. This programme standards provides minimum requirements of Benchmark Standards which need to be met by HEPs at each level. (the details of programme content can be seen in programme design and delivery on page). HEPs, however, are expected to go beyond Benchmarked Standards to Enhanced Standards.

This document covers a wide range of subjects within the fields of teacher education and education sciences. Notwithstanding the five Components of the Education Disciplines, an alternative way of looking at programmes in teacher education and education science is, for instance, by categorising into 5 structures, namely, teaching and training, education science, training for pre-school teachers, training for teachers with subject specialization, and training for teachers of vocational subject. Recognizing the importance of the multi disciplinarity of the knowledge corpus, various kinds of the joint corpus or a body of knowledge, such as science with education, religion with education, business with education, et cet tera are emphasized. The following are brief decriptions of sub fields in each domain;

1. Teaching and training for Mathematics Education

The subjects provided in teaching and training aim to provide student teachers systematic knowledge of teaching and learning. It encompasses six specialized disciplinary knowledge, mathematics and science education, educational psychology, educational foundation, educational management, planning and policies, educational technology, guidance and counselling.

2. **Mathematics and science education**

Concentrates on both disciplinary knowledge and pedagogical knowledge and skills in teaching mathematics and science. Student teachers should be trained in both mathematical education background knowledge, and mathematics teacher education, science education and science teacher education; moreover, the interrelation between science, technology and society are emphasized. The subjects generally involved are mathematics education, mathematics teacher education, science education, science teacher education, science technology and society, and environmental education. .

3. Educational psychology

Aims to provide student teachers general knowledge and theories regarding how children and adults learn, and to expand students' knowledge in terms of individual differences, classroom dynamics, and learning variables and to develop learners' knowledge and skills on issues and theories applied in school counselling, special education, and gifted education. Courses within educational psychology generally involve educational psychology, special education, counselling education and gifted education.

4. Educational foundation

Aims to provide essential knowledge and skills which are required to be professional teachers. The courses generally consist of sociology of education, social science education, philosophy of education, and values education.

5. Educational management, planning and policies

Focuses on general issues on educational management, planning and administration with emphasis in K-12 administration, gifted administration, and higher education administration. Besides, educational policies and planning across disciplines and leadership in education are provided to enhance scholar- teachers' knowledge and understanding about concepts of educational management and effective educational leadership, and to develop knowledge and skills to make effective decision and organization management.

6. Educational technology

Aims to prepare students with knowledge and skills to be able to design, implement and evaluate media and technology initiatives in education. The courses generally cover instructional technology, web-based learning, project based learning, design instructional module, mobile learning, e-learning and multimedia education.

7. Guidance and counselling

Provides comprehensive programmes ranging from general knowledge and issue in counselling to counselling programmes in specific fields. It aims to support and facilitate students' personal, social, educational and career development. The courses generally encompass school counselling, counselling, vocational counselling, and career counselling.

8. Education science

Education science provides substantial professional knowledge and skills in education. It is divided into 3 sub-fields of study, educational assessment, testing and measurement, curriculum and instruction, comparative and international education.

9. Educational assessment, testing and measurement

Focuses on general issues on assessment and evaluation in education, and specific techniques in testing and measurement, and specific issues on language assessment and the integration of technology in assessment, and

also provides alternative strategies of measurements of students' learning performance.

10. Curriculum and instruction

Provides fundamental knowledge and ideas in curriculum planning, development, implementation and evaluation. Essential knowledge and skills in pedagogy and andragogy, issues of curriculum in multidisciplinary knowledge, comparative and international education, and future curriculum studies are provided to offer comprehensive concepts and understanding of curriculum. Furthermore, curriculum issues in extension and co-curricular education, and distance education are also emphasized.

11. Training for pre-school teachers

Training for pre-school teachers focuses on general knowledge and issues in early childhood education, which is divided into 3 areas of study, that is, early childhood education, numeracy, and literacy.

12. Early childhood education

Aims to prepare student teachers with deep understanding and knowledge on how children grow and develop so as to guide young children with different social and cultural backgrounds to have appropriate development in language, literacy and skills. The subjects in this area include early childhood education, numeracy, and literacy.

13. Training for teachers with subject specialization

Teacher training in specialized subject concentrates on preparing scholar t teachers with knowledge and skills in teaching specific disciplines. It covers 5 sub-fields of study, namely, arts and humanities education, language and literacy education, health education, business education, and special education.

14. Arts and humanities education

Addresses issues in terms of educational practice and theory in art and moral education. It includes art education, Islamic education, moral education, civic education, citizenship education, geography education, Al-Quran education, history education, and special education.

15. Language and literacy education

Focuses on general theories and issues in language education, such as, language, reading education, bilingual/trilingual education, to produce graduates who are proficient and knowledgeable about issues in language teaching and learning in the evolving environment. In particular, the programme should offer concentrations in English, Arabic and Malay language education. , Specific programme on teaching of Arabic as a second language, teaching of English as a second language are also provided.

16. Health education

Aims to prepare students with general knowledge of health issues of individuals and communities, and to apply the principles of behavioural and social sciences to promote health-related behavioural and social change.

17. Business education

Aims to prepare students to be knowledgeable entrepreneurs and skilful competitors in the business world. The programme focuses on the basic skills of reading, writing and computation which are an integral part of the business, and general knowledge of business practices. It covers courses, such as, accounting and economics.

18. Special education

Addresses general issues on theories and practices, cognitive structure and process, behavioural selectionism, disability construct, and family studies and child development etc. Specific areas in special education focus on behavioural disorders (e.g., autism, emotional disturbance), blindness, visual impairment, deafness and hearing,

19. Training for teachers of vocational subjects

Training for teachers of vocational subjects provides comprehensive pedagogical knowledge and skills in preparing teachers in co-curriculum and vocational training. It includes sports science, vocational and technical education, and engineering education.

20. Sports science

Focuses on preparing student teachers with knowledge and understanding of sports science and developing knowledge and skills in teaching physical education.

21. Vocational and technical education

Aims to prepare student teachers with professional knowledge and skills in teaching specific disciplines, including life skills education, entrepreneurship education, agricultural education, and home economics-study and teaching.

22. Engineering and education

Aim to develop and deliver effective and meaningful learning experience which incorporates theory with real life application for future engineers and educators, to promote the role of education in developing engineering professionals. The courses in this area generally include civil, mechanical and electrical engineering.

Note:

The above are examples of education subject offerings by an Education Faculty in a Public University in Malaysia. An array of other Knowledge Content, Pedagogical Content, Professional Knowledge content can be offered by the HEPS as deemed appropriate to scholar-teachers' interests, needs, capacities and the changing and advancing requirements of the education enterprise..

Appendix 7

A NOTE ON CREDIT HOURS

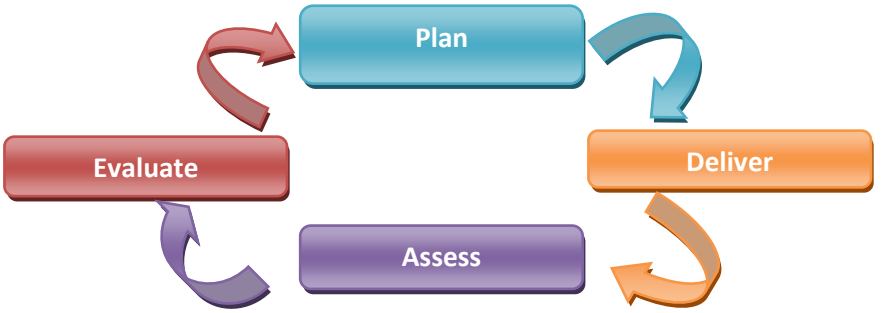
The credit-hour system used in Malaysian Universities reflects the students' contact hours during a particular semester. The number of credit hours allocated for a course is based on the delivery mode used to engage students in the processes of mastery of the contents of a course/module. For example, one hour of lecture per week over a fifteen-week semester constitutes one credit hour, while 3 hours of laboratory session or studio work per week also constitutes one credit hour. For every one hour of lecture, students are expected to spend 2 to 3 hours on their own to prepare and to revise the lessons associated with the lecture. Longer hours are allotted for laboratory sessions even though a lower credit hour is given, as relatively less time is needed to prepare for a laboratory session compared to lectures. While credit hours calculated based on contact time have been accepted in Malaysia, concerns have been raised on the actual amount of time that is spent by students outside the classroom. There have been instances where students spend too little time on any particular course outside the classroom. There are also instances where too much work is assigned. In addition, no form of monitoring or enforcement exists to ensure that students are engaged in learning activities related to the formal contact time. There are, however, audit visits which provide feedback regarding Quality Benchmark Standards and Enhanced standards as practised by institutions. Institutions which seriously and systematically address Student Learning Time to promote Mastery Learning are on track to show evidence of Enhanced Standards.

Many studies have been conducted to ascertain the ideal or appropriate amount of time that students should spend on a course for a given credit hour. A study in 2005 concluded that for every one credit hour specified, students need to spend 40 hours of learning. This was determined by considering the total amount of time available in a week, the time needed for personal matters, the time for rest and recreational activities, and the time for studying. For a course of 3 credit hours, students will have to spend 120 hours, which involves both face-to-face meetings (lectures/laboratory work/tutorials, etc.) and non-face-to-face activities (Zainal Mohamed, 2005). The credit hour is no longer based on the number of formal contact hours students have to fulfil in a course; instead, it is based on all types of learning activities, be it face-to-face or otherwise.

The concept of Student Learning Time (SLT) is believed to be more effective in ensuring that the learning process is not under-or-over-loading students. It requires instructors to plan their lessons even well beyond the content. Instructors also need to consider their delivery methods and the learning activities that students need to conduct on their own in the non-face-to-face mode. For a given course with the same content, different credit hours may be assigned to the course depending on the delivery mode and learning activities designed by the instructors for the students. HEPs are expected to address SLT in the Design, Delivery, and Evaluation of any particular Course and in the collectively of Courses for any particular Education Programme.

There is a large number of studies worldwide on class time and student learning and related phenomena which would be useful reference for HEPs to ensure insightfulness and thoughtfulness in the design of educational programmes.. (See, for instance, Kenneth Leithwood, Karen Seashore Louis, Stephen Anderson and Kyla Wahlstrom (2004) Review of Research-How Leadership Influences Student Learning. New York, The Wallace Foundation. and, Kolbe, T., Partridge, M, & O'Reilly, F. (2011). Time and learning in schools: A national profile. Boston, MA: National Center on Time & Learning.

FOUR STAGES FOR EFFECTIVE CURRICULUM DELIVERY



Mapping of learning outcomes and delivery methods

MQF learning outcome domains	Examples of delivery methods
Knowledge	Lectures, tutorial, discussions, debates, forums, presentations, field trips, industrial attachment,
social skills and responsibilities	Group work, industrial attachment, community projects

Factors of effective delivery strategies at micro level