



Basic Education Curriculum

B.E. 2544 (A.D. 2001)

Ministry of Education
Thailand



Basic Education Curriculum B.E. 2544 (A.D. 2001)
Department of Curriculum and Instruction Development
Ministry of Education

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Preface

The Basic Education Curriculum B.E.2544 (A.D. 2001) is the national core curriculum, the goals of which are to develop learners in 4 areas:-morality, intellectual growth, quality of life, and competitive ability. The main focuses are:-to accelerate the potential of learners; to enable them to live a happy life according to the basis of good citizenship of the country and the world; to develop their professional or vocational abilities; to be able to make appropriate decisions for furthering their advanced education in line with their competencies, interests and experience. The national core curriculum provides a framework for the development of the school curriculum, from primary education grade 1-secondary education grade 6. It can be applied to formal, non-formal, and lifelong education systems, as well as education for special groups and talented children. Learning standards are formulated to ascertain the quality of learners. Educational institutions must establish their own curricula on the basis of the substance and standards stipulated by the Ministry. They shall bear in mind their own communities' problems, intellectual outputs, and desirable characteristics. The goals must always focus on fostering good members of the family, community and society, at national and international levels. Therefore in order to ascertain educational institutions' knowledge, understanding and confidence in building their own curricula, additional details relevant to this end are provided. At the same time, to enable the effectiveness of those involved in curriculum building, the following documents are produced: i.e. substance and learning standards of 8 groups of curricula; guidelines and manuals etc.



In formulating this basic education curriculum, the Ministry of Education had appointed a Sub-Committee for the Development and Management of the Basic Education Curriculum, to be responsible for these activities. The Department of Curriculum and Instruction Development was assigned as Secretariat. There has been excellent co-operation and contributions of ideas and experience are from all working groups, inside and outside the Ministry of Education, non-governmental organizations, parents, learners and all professionals.

These contribute to the completeness and effectiveness of the curriculum for education for all Thai citizens.

Their unflagging efforts are very much appreciated.



Charoon Shoolap

(Mr.Charoon Shoolap)

Permanent Secretary of State for Education.



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Ministry of Education Decree

Ref. DCID 1166/2544 on

The Implementation of the Basic Education Curriculum B.E.2544

In order to ensure the relevancy between basic education and changes in the fields of economy, society and knowledge advancement, leading to formulation of new strategies in education quality development to accelerate and fulfill the needs of Thai individuals and society, learners competitive capacity and creative co-operation with the world society, in line with the objectives of the Constitution of Thai Kingdom B.E. 2540, and the National Education Act B.E. 2542;

Also, under the authorization of Article 20 of the Act on Administration of Government Services B.E. 2534, Article 25 of the Act on Revising the Governments Organization Infrastructure, B.E. 2534 and Article 74 of the National Education Act B.E.2542, the Ministry of Education, thus, authorize the application of the Basic Education Curriculum B.E. 2544, of which text appears as an appendix to this Decree. This new curriculum shall replace all previous curricula for primary, secondary education or equivalents. Conditions and the time-frame for application are as below:-

In Education Year B.E. 2546, implementation of Basic Education Curriculum B.E. 2544, for primary education grades 1 and 4; secondary education* grades 1 and 4;

Note *Secondary education grades 1-6 are equivalent to grades 7-12 in American school system.



In Education Year B.E. 2547, implementation of Basic Education Curriculum B.E. 2544, primary education grades 1 and 2; grades 4 and 5; secondary education grades 1 and 2; grades 4 and 5;

In Education Year B.E.2548, implementation of Basic Education curriculum B.E. 2544, at all grades.

For practical purposes, the implementation of Basic Education Curriculum shall begin at first in pilot schools in network, the names of which shall be announced by the Ministry of Education, in Education Year B.E.2545, at respective grade levels mentioned afore.

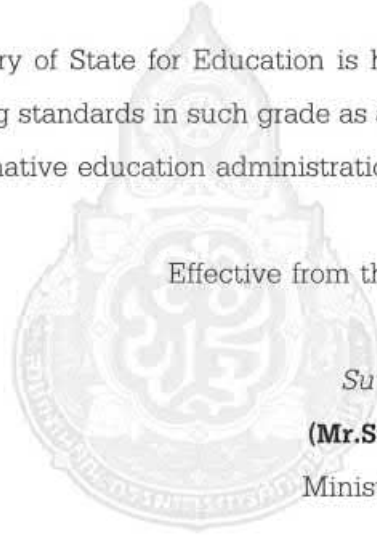
The Secretary of State for Education is hereby authorized to cancel, add and change learning standards in such grade as appropriate, bearing in mind target groups and alternative education administration and management.

Effective from the 2nd November B.E.2544

Suwit Khunkitti

(Mr.Suwit Khunkitti)

Minister of Education





Basic Education Curriculum B.E.2544

Preamble

Academic knowledge and rapid technical advancement during the era of globalization has caused tremendous changes in the national and international social and economical spheres. These changes necessitate revision of the national education curriculum which is a fundamental mechanism for the development of national education quality. The ultimate goals are to foster morality, intellectual development, happiness, competitive potential, and creative/ positive competition in the world arena.

The monitoring, assessment and researches conducted by the Department of Curriculum and Instruction Development have made apparent some limitations and weaknesses in the current Curriculum B.E. 2521 (revised B.E. 2533) at primary and secondary grades which have been implemented during the last 10 years. These are as below:-

1. The formulation of curriculum by central authorities does not reflect or respond to the needs of education institutions and provincial society;
2. Curriculum and learning development in mathematics, science and technologies fail to build up leaders in these fields. This necessitates the improvement of teaching and learning procedures in order to build up skills, creativity, and the right attitude among Thai people;
3. The application of curriculum fails to foster the foundations of critical thinking, to create learning procedures in life skills and management, and to enable learners to effectively tackle fast changes in the social and economic areas;

4. Foreign languages learning, especially in the English language fails to build up competencies in using languages for communication and seeking knowledge from various and extensive resource centres in the Information Age;

The Constitution of the Kingdom of Thailand, B.E. 2540 stipulates that all Thai people have an equal right to receive free basic education of good quality, of not less than twelve years.

The State shall encourage participation from local authorities and communities in the management of education and training. Subsequently the National Education Act B.E.2542 defines education as a learning processes that accelerates the prosperous growth of individuals and society. Such development is achieved through the transference of knowledge, training, the preservation of culture, the creation of academic advancement and knowledge, the promotion of the effective management of the learning environment, and the support of lifelong education. The ultimate aims of education are to transform Thai citizens into perfect human beings, having good health, wholesome minds, intelligence, knowledge, morality, good behavior and cultural life. The State shall provide opportunities for society to participate in education management, and developing the content and procedure of sustainable learning.

Moreover, the National Education Act stipulates the formulation of a basic curriculum to foster Thai-ness, good citizenship, competency in life skills, careers, and opportunities to further education. Basic education institutions shall be assigned the responsibility to form their own basic education curricula to reflect local and community problems, and local wisdom, to establish a desirable quality of good members of family, community, society and the country. The National Education Act stipulates 9 years for compulsory education.

Based on the State's vision which confirms education policy in building up quality manpower, creating jobs to redeem the economy and social crisis, establishing sustainable national security, strengthening the nation through



education, revising the education infrastructure and systems, emphasizing quality, effectiveness and equality, applying education technology, having a firm belief in education for creating manpower, integrating education, religion and culture in learning reformation and national education policy for creating jobs, assuring knowledge and career for the youth, the Ministry of Education, by virtue of section 74 of the National Education Act B.E.2542, consider appropriate to formulate Basic Education Curriculum B.E.2544. The Curriculum shall be based on "unity in policy and diversity in practice". There shall be a twelve-year core curriculum which is flexible, providing substance, learning standards for each group of subjects, for each grade, which covers 3 years. The core curriculum shall include only subjects required for improving the quality of Thai life, good citizenship, life skills, careers, and further education. Educational institutions shall be responsible for providing details for each academic year or semester, to make them relevant to community's and society's problems and intellectual output as well as desirable goals. Learners shall be good members of the family, community, society and the country. Consideration shall also be given to the relevancy to each group of learners' potential, aptitude and interest.

Education management emphasizes the importance of knowledge, thought, capability, morality, learning processes and social responsibility. The aims are to foster the well balanced development of each individual as learner is the most important. Every one is capable of learning and self-development, learners shall be encouraged to develop themselves in line with their natural inclinations, and to fully realise their own potential. The following subjects are considered very important: - i.e. knowledge about self, relationship between self and society, family, community, country and the world; Thai society historical development, political system, democratic government and monarchy under constitution; science and technology knowledge and skills; knowledge, and sustainable experience in management, preservation and utilization of natural resources and environment; knowledge about religion, art, culture, sports, Thai

wisdom and their application; knowledge and skills in mathematics; languages and their application, in particular Thai language; knowledge and skills in careers; knowledge and skills in leading a happy life.

Educational institutions are responsible for administering learning development which emphasizes thinking processes, management and confronting real situations and the application of knowledge for preventing and solving problems; organizing activities to enable learning from actual experience; arranging practical exercises to enhance skills in doing, critical thinking and satisfactory achievement; fostering reading habits, the thirst and continuous search for knowledge, inculcating skills for a well balanced integration of all subjects; facilitating learning processes to enable learners to be all round knowledgeable and training in application of research procedures as part of learning processes. For all these activities, consideration shall be given to the differences among learners. Attempts must be made for learning at any time, in any place. Learning outputs and experience can be equated at all education systems.

In addition, to achieve the ultimate goals of basic education, educational institutions must co-ordinate and co-operate with parents and members of the community in a continuous attempt to ensure sustainable quality. Moreover, it is necessary for the Ministry of Education to promote and strengthen learning resources centres, both within and outside educational institutions, to make sure of the availability of all kinds of learning materials required for all subjects in the curriculum, and for development to universality. Towards these ends, the Ministry of Education shall produce documents related to the curriculum:- e.g. manuals for application of the curriculum, guidelines for adaptation of the curriculum in response to the needs and requirements of each educational institution, teacher manuals, documents related to each group of subjects, guidelines for measurement and assessment, management of guidance systems, research and applications of research outcomes to improve learning



practice. Public relations documentation for the general public, parents, and learners shall be published and distributed. Such documents are to create understanding and awareness of their roles in the development of selves as well as of the society.

Principles

To ensure that basic education management is in line with the national policy for education management, the following principles related to the Basic Education Curriculum are as below:-

1. Education shall aim at unity of the national, emphasizing Thai-ness in parallel with international consciousness;
2. Education shall be for all Thai citizens who shall have equal rights to be educated, whereas social institutions shall be invited to be State partners in education provision.
3. Learners shall be supported in order that they develop continuously and as lifelong learning, taking into consideration that learners are the most important and learners are capable of self-development and self-realization;
4. The curriculum structures, substance, time-frame, and learning management processes shall be flexible;
5. The curriculum shall be applied to all education systems, for all target groups; the learning results and experience shall be equated and transferred.

Goals

The basic education shall aim at the full development of Thai people in all aspects: morality, intellect, happiness, Thai-ness, potential in furthering education and securing careers. To implement these ideals the following goals and standards are stipulated:-

1. Self-esteem, self-discipline, strict observance of religious teaching and practice, morality, right behavior, and desirable virtue;
2. Creative thinking, thirst for knowledge and learning, acquiring reading, writing and research habits;
3. Universal knowledge, keeping pace with changes and advancement in academic world, skills and potential for communication and technology management, adjustment of thinking and working processes to encounter changing situations;
4. Skills and learning processes in mathematics, science, thinking skills, generating intelligence and quality life skills;
5. Physical exercises for good health and personality;
6. Efficiency in producing and consuming, a preference for producing than consuming;
7. Knowledge of Thai history, pride in being a Thai, a good citizen who strictly observe democratic ways of life, under a regime of constitutional monarchy .
8. Consciousness in the preservation of Thai language, art, culture, custom, sports, local wisdom, natural resources, and environmental development;
9. Love and dedication to the country and community, contributions to the society's prosperity.

Structure

To implement principles, goals and learning standards at the educational institutions, and for those concerned in the formulation of educational institution curricula, the structure of the basic education curriculum is stipulated as below:-



1. Grade levels

There shall be 4 grade levels in accordance with learners development.

- 1.1 First level-primary education grades 1-3
- 1.2 Second level-primary education grades 4-6
- 1.3 Third level-secondary education grades 1-3
- 1.4 Fourth level-secondary education grades 4-6

2. Substance

The substance consists of a body of knowledge, skills or learning processes, values or virtues, morality and right behavior. This substance is assembled into 8 groups:-

- 2.1 Thai language.
- 2.2 Mathematics.
- 2.3 Science.
- 2.4 Social studies, religion and culture.
- 2.5 Health and physical education.
- 2.6 Art.
- 2.7 Career and technology.
- 2.8 Foreign languages.

This is a fundamental substance required for all learners. It can be divided into 2 groups. The first group consists of Thai language, mathematics, science, social studies, religion and culture. These subjects are basic for educational institutions learning management that build up thinking processes, for use as strategies for solving problems and in redeeming the national crisis. The second group consists of health and physical education, art, career and technology, and foreign languages. These are required for forming the foundation of humanity, for creating potential in thinking and creative working.

Matters related to environmental study and learning standards are

distributed to various subject groups, in particular science, social studies, religion and culture, health and physical education.

In the foreign languages group, English is compulsory for all grade levels. Other foreign languages are selective, as appropriate.

The learning substance for each subject group is stipulated to develop quality learners in general. Educational institutions can add subjects which respond to individuals' capacities, aptitudes, interests and potential.

3. Activities for learners development.

Activities for learners development aim at developing and realising individuals' aptitude and potential, in addition to stipulated activities required for the 8 subjects groups of learning processes. Individuals are encouraged to happily participate in undertaking activities chosen by them in accord with their tendency and real interest. Vital development includes humanity in total body, intellect, emotions and social participation. Such activities may be organized as parts of implementation of the national policy in fostering quality youth to be perfect human beings. Morality, right behavior, discipline, awareness of social contribution and co-operation shall be inculcated in them. In execution of such activities, the educational institutions shall be firm in the objectives, well selected forms and appropriate procedures.

According to their nature, development activities are divided into 2 groups:- i.e.

3.1 Guidance activities aimed at promotion and development of individuals' capacity and differences. Each shall be guided to identify own self and own potential. Guidance personnel shall be responsible to show ways and means to undertake actions for improving life skills, self-emotion controlling, multiple intelligence learning, and positive human relationship. Every instructor shall be responsible to guide learners in everyday life practice, in furthering education, self-development for future careers and actual works.



3.2 Students' activities to be handled by them in complete circle:- i.e. study, analysis, planning, application of plans, evaluation, and up-grading works. Emphasis shall be on group works such as Boy Scout, Girl Guide, Junior Red Cross and Social Service Group.

4. Learning Standards

Learning standards stipulated for 8 subject groups in basic education curriculum define learners' qualities in knowledge, skills, procedures, morality, right behavior, and value for each subject group. They are aimed at developing desirable character. Standards are divided into 2 groups as below:-

4.1 Standards for basic education.

These are standards for each subject group in basic education learning results after graduation;

4.2 Standards for each grade level learning.

These are standards for each subject group learning after learners' graduation from each grade level:- i.e. primary grade levels 3 and 6, secondary grade levels 3 and 6.

The standards are stipulated specifically for application of subjects related to learners' quality development. Educational institutions may set up standards for solving community's and society's problems, local wisdom, desirable qualifications of members of family, community, society at large and the country, as well as standards for strengthening learners capacity, aptitude, and interest, as necessary.

5. Learning time allocation.

Times allocated for classroom learning and development activities are as below:-

5.1 The first level, primary grades 1-3:-annual average 800-1,000 hours:-daily average 4-5 hours;

5.2 The second level, primary grades 4-6:-annual average 800-1,000 hours:-daily average 4-5 hours;



5.3 The third level, secondary grades 1-3:-annual average 1,000-1,200 hours:-daily average 5-6 hours;

5.4 The fourth level, secondary grades 4-6:-annual average, not less than 1,200 hours:-daily average, not less than 6 hours.

Basic Education Curriculum time-frame structure in total is displayed in the following diagram.

Basic Education Curriculum Structure.

Grade levels	Primary Education		Secondary Education	
	First level (grades 1-3)	Second level (grades 4-6)	Third level (grades 1-3)	Fourth level (grades 4-6)
	← Compulsory education →			
	← Basic education →			
8 Subject Groups				
Thai language	1	1	1	1
Mathematics	1	1	1	1
Science	1	1	1	1
Social studies, religion, and culture	1	1	1	1
Health and physical education	n	n	n	n
Art	n	n	n	n
Career and technology	n	n	n	n
Foreign languages	n	n	n	n
Development activities	▲	▲	▲	▲
Time allocation	Annual average 800-1,000 hrs.	Annual average 800-1,000 hrs.	Annual average 1,000-1,200 hrs.	Annual average not less than 1,200 hrs.



- Notes:
- 1 Educational institutions must apply these subjects groups to build foundation for thinking process, learning and problem solving.
 - n Core subjects for promotion of humanities, fundamental potential required for thinking and working.
 - ▲ Extra-curricular activities required for self-development in accordance with individuals' potential.
 - **Educational institutions may adjust time-frame and subject groups to suit each target group as necessary.**
 - **Non-formal education authorities may adjust time-frame and grade for each level of education as necessary.**

Curriculum design and building

Basic Education Curriculum stipulates learning standards for learners development from primary education grade 1 to secondary grade 6. These are meant for all learners and all target groups. They may be adapted for application in all education systems; formal, non-formal and lifelong education.

As for the management of pre-school children, special curriculum is formulated for strengthening development and for preparing the child to enter primary grade.

Basic Education Curriculum substances and time-frame structures are stipulated on broad basic. Learning standards cover quality of learners by the end of 12 years, as well as by the end of each grade level for each subject group. Educational institutions shall adapt these structures, taking into consideration, problems, readiness, identity, local wisdom and desirable characteristics. To achieve this end, educational institutions shall prepare all subjects in each subject group as specified by the standards.

Educational institutions may create additional subjects to form a new learning unit, or variety of intensive courses for learners to select those to satisfy their inclination, interest, needs and individual difference. This may be achieved



by selecting subjects from 8 groups in the second level, primary grades 4-6, the third level, secondary grades 1-3 and the fourth level, secondary grades 4-6. Learning standards for each subject shall be stipulated. For the first level, primary grades 1-3, learners shall study only basic subjects, not the intensive ones.

Educational institutions shall make sure that all subjects in 8 groups for all grade levels are suitable for learners' development and learning inclination. For compulsory education-primary grade 1 up to secondary grade 3, learning time-frame is annual. For secondary grades 4-6 the subjects are divided into learning units.

The first and the second level, primary grades 1-3 and 4-6 These are the first period of compulsory education. The curriculum focuses on learning for quality of life development, social studies processes, basic skills in reading, writing, mathematics, critical thinking, communication, and foundation of humanities. Emphasis is laid on well balanced integration in physical development, intelligence, emotions, social relation and culture.

The third level, secondary grades 1-3 These are last period of compulsory education, focusing on inculcating learners' capacity for self-development, aptitude, and interest. Learners shall be able to develop self-identity, competency, basic learning skills, and life skills. The development shall be well balanced, covering knowledge, thought, competency, morality and social responsibilities, ability in building up good health for self and community, pride in being a Thai, foundation of learning for career or advanced education.

The fourth level, secondary grades 4-6 The curriculum emphasizes specific knowledge and skills, especially knowledge and competency in science and technology. The aims are:- to stimulate creative thinking and its application for career and further education, to develop self and the country as appropriate to learners' roles, to foster leadership, and to provide services to community.



For flexibility in establishment of learning plan to respond to each learners' capacity, aptitude, and interest in knowledge and career, learning units shall be formed.

Management of learning time-frame

Educational institutions shall arrange flexible time-frame for each level, for each subject in 8 groups, as well as those additional subjects created by the institutions. Time shall also be allocated for development activities as appropriate during each semester.

The first level, primary grades 1-3 Annual time-frame, 4-5 hours daily shall be stipulated because this level is the first step of basic education. It is necessary for learners to build up fundamental basic skills which enable them to learn other subjects faster. These basic skills are:- Thai reading and writing, and mathematics skills, 50% of learning time shall be allocated for practicing reading, writing and calculating in each week. The remaining time shall be spent for learning all other subjects, as well as for development activities.

The second level, primary grades 4-6 Annual time-frame, 4-5 hours daily. Time allocation for Thai language and mathematics may be reduced to 40% of time allocated for one week, increasing time for science. However, for Thai language and science, practical exercises and regular reviews are required for development of higher level of basic skills. Therefore, there remains enough time for learners to play, and to participate in development activities and other works. Time allocation for these activities amounts to 20%. Educational institutions may utilize the rest for arrangement of appropriate activities.

The third level, secondary grades 1-3 Annual time-frame, 5-6 hours daily. Approximate time shall be allocated to 8 subject groups on more or less equal basis. Nevertheless, the importance of Thai language, mathematics and



science must be recognized and more time shall be allocated to these 3 subject groups for those learners who wish to continue education at higher level. Special career subjects or programmes shall be arranged for learners who are capable to enter professional world.

The fourth level, secondary grades 4-6 Semester time-frame, unit weighting for each subject. In principle, 40 hours each semester is equal to one unit. Daily learning time is not less than 6 hours. Time allocation and subject arrangement for this level are to prepare learners for special subjects. In each subject group there are selective courses, and "additional subjects" to attract attention, intensive subjects at higher level such as calculus in the area of mathematics, or advanced science subjects. These are created for learners having high achievement in these subjects. Educational institutions may also adjust curriculum management forms for certain subjects such as art, career and technology which are necessary. Short courses, or single course or integrated courses may be created. Having effectively managed learning processes standards, educational institutions may develop such courses to be special and advanced selective subjects.

The afore described learning management is for formal education. As for non-formal and lifelong education time- frame may be flexible to suit state of the affairs and to provide opportunity to learners.

Education management for special target groups

Some education management are arranged for special target groups i.e. religion, performing art, sports, vocational study, special education to accelerate excellence in different areas, education for persons with learning deficiency, specially gifted persons, non-formal education, alternative education organized by families and organizations. For these special target groups, basic learning standards may be adjusted as appropriate, in conformity with the criteria and procedures stipulated by the ministerial regulations.



Learning substance and standards

Learning substance and standards to be applied as criteria to stipulate quality of learners after graduation at basic education level, comprise only fundamental ones for building up quality of life. Educational institutions may add those responsive to learners' capacity, aptitude and interest. Details of substance and standard are as below:-

Thai language

Substance 1: Reading

Standard T 1.1 Application of reading process to compile knowledge, to stimulate thinking, to make decision, to solve problems, to build up vision for living, and to acquire reading habit.

Substance 2: Writing

Standard T 2.1 Application of writing process to communicate; to be capable of writing essays, abstracts, and features, different forms of information reports, education research reports effectively.

Substance 3: Listening, observing and speaking

Standard T 3.1 Competency in selective listening and observing critically, speaking to explain knowledge, thought and feelings at different occasions effectively and with consideration.

Substance 4: Principles on language application

Standard T 4.1 Understanding language nature, theory, evolution, power, wisdom, and preservation of language as national property.

Standard T 4.2 Language application competency in search of

knowledge, character building, identity, language relationship with culture, career, social activities and daily life.

Substance 5: Literature and literary outputs

Standard T 5.1 Understanding, appreciation and application of Thai literature and literary outputs, ability to express critical ideas and literary review.

Mathematics

Substance 1: Numbers and numerical works

Standard M 1.1 Understanding of number exposition diversity and application in real life.

Standard M 1.2 Understanding of outputs of numerical works and their relationship, ability to apply numerical works in problems solving.

Standard M 1.3 Application of estimation in computation and problems solving.

Standard M 1.4 Understanding numerical systems and ability to apply numerical property.

Substance 2: Measurement

Standard M 2.1 Understanding measurement foundation.

Standard M 2.2 Measurement and estimation of size of objects to be measured.

Standard M 2.3 Solving measurement problems.

Substance 3: Geometry

Standard M 3.1 Capacity to explain and analyze two and three dimensions geometric figures.



Standard M 3.2 Application of visualization, spatial reasoning and geometric model for problems solving.

Substance 4: Algebra

Standard M 4.1 Capacity to explain and analyze algebraic pattern, relationship and various functions.

Standard M 4.2 Capacity to apply algebraic expression, equation, non-equation, graph and other mathematics models to represent various situations; interpretation and problem solving.

Substance 5: Data analysis and probability

Standard M 5.1 Understanding and capacity to apply statistic procedures for data analysis.

Standard M 5.2 Capacity to apply statistic procedures and probability, knowledge in reasonable estimation.

Standard M 5.3 Capacity to apply statistical knowledge and probability in decision making and problem solving.

Substance 6: Mathematics skills and procedures

Standard M 6.1 Problem solving capacity.

Standard M 6.2 Reasoning and justification ability.

Standard M 6.3 Communication ability, presentation and interpretation of mathematics knowledge

Standard M 6.4 Capacity to relate various disciplines within mathematics and outside.

Standard M 6.5 Creative thinking.

**Science*****Substance 1: Living beings and life existence processes***

Standard Sc 1.1 Understanding foundation of living beings, relationship between structures and functions of various systems operation; procedures in searching for knowledge, communication of knowledge and application of knowledge for own self-existence, taking good care of living beings.

Standard Sc 1.2 Understanding importance of heredity procedure and transfer, evolution of living beings, bio-diversity, effects of utilization of bio-technology on human beings and environment, procedures in searching for knowledge and fostering science consciousness, communicating acquired knowledge and application of knowledge.

Substance 2: Life and environment

Standard Sc 2.1 Understanding local environment, relationship between living beings and environment, and among all living beings in ecological systems, procedures in searching for knowledge and fostering science consciousness, communicating acquired knowledge and application of knowledge

Standard Sc 2.2 Understanding importance of natural resources, utilization of resources at local, national and international spheres, application of knowledge in sustainable management of natural resources and local environment.



Substance 3: Properties of matter

Standard Sc 3.1 Understanding matter, its quality and relationship with structure, skills in searching for knowledge procedures, and possessing science consciousness, communicating acquired knowledge and application of knowledge.

Standard Sc 3.2 Understanding nature and changing situation of matter, matter solution, chemical reaction, skills in searching for knowledge procedures and possessing science consciousness, communicating acquired knowledge and application of knowledge.

Substance 4: Force and mobility

Standard Sc 4.1 Understanding nature of force, magnetic force, gravity force and nuclear force, skills in searching for knowledge procedures, and possessing science consciousness, communicating acquired knowledge and application of knowledge effectively and righteously with morality.

Standard Sc 4.2 Understanding various forms of natural object mobility, skills in searching for knowledge procedure and possessing science consciousness, communicating acquired knowledge and application of knowledge.

Substance 5 Energy

Standard Sc 5.1 Understanding relationship between energy and living, energy transformation, matter and energy interaction, result of energy utilization for life and environment, skills in searching for knowledge





procedures and possessing science consciousness, communicating acquired knowledge and application of knowledge.

Substance 6: Evolution of earth

Standard Sc 6.1 Understanding chains of natural happening within and on earth surface, chains relationship which cause climatic changes, topography, and earth form, skills in search of knowledge procedures, and possessing science consciousness, communicating acquired knowledge and application of knowledge.

Substance 7: Astronomy and space

Standard Sc 7.1 Understanding the evolution of the solar system and galaxy, internal solar system relationship and its effect on life on the earth, skills in searching for knowledge procedures and possessing science consciousness, communicating acquired knowledge and application of knowledge.

Standard Sc 7.2 Understanding the importance of space technology for investigating space, natural resources, agriculture and communication, communicating acquired knowledge and morally application of knowledge for life and environment.

Substance 8: Nature of science and technology

Standard Sc 8.1 Application of science and science consciousness in searching for knowledge, problems solving, understanding fixed forms of majority of natural phenomena which can be investigated and explained, depending on availability of current information



and tools, understanding science, technology, society and environment relationship.

Social studies, religion and culture

Substance 1: Religion, morality, righteousness

- Standard So 1.1 Understanding history, importance and teachings of Buddhism and other religions, ability to apply religious doctrine in living together.
- Standard So 1.2 To strictly adhere to moral codes, good deeds, right value, and faith in Buddhism or religion which oneself has faith.
- Standard So 1.3 To observe and behave in accordance with moral teaching and religious rites of Buddhism or religion which oneself has faith, and right value, ability to apply religious teaching for self-development, for society welfare, for preservation of environment, and for peaceful living in society.

Substance 2: Civil responsibility, culture, and life in society

- Standard So 2.1 To behave in accordance with good citizen's responsibilities, laws, customs and Thai culture, peaceful living in Thai and world society.
- Standard So 2.2 To understand current politics, firmly believe in, and uphold democratic system of government under a constitutional monarchy.

Substance 3: Economics

- Standard So 3.1 Understanding and to be capable to efficiently and cost-effectively administer and manage resource production and consumption, utilization of limited



resources available, sufficient economy for well balanced living.

- Standard So 3.2 Understanding various economic systems and their relationship, necessity to co-operate for economic stability at international level.

Substance 4: History

- Standard So 4.1 Understanding historical importance, meaning, era and period, capable of critical and systematic analysis of events by utilizing historical bases.
- Standard So 4.2 Understanding historical evolution and development of human beings, in the events relationship and continuous changes, well aware of their significance and effects.
- Standard So 4.3 Understanding historical development of Thai national, culture, local wisdom, be proud of being a Thai and maintaining Thai identity.

Substance 5: Geography

- Standard So 5.1 Understanding the earth physical structure, space relationship which results in cross effects within natural systems, capable of utilizing maps and geographical tools to search for geo-data and information needed for effective application and management.
- Standard So 5.2 Understanding inter-relationship between human beings and physical environment which lead to cultural creation, and consciousness of resource and environment preservation for sustainable development.



Health and physical education

Substance 1: Human growth and development

Standard H 1.1 Understanding human growth and development nature.

Substance 2: Life and family

Standard H 2.1 Understanding and appreciating life and family, sex education and life skills.

Substance 3: Movements, physical exercises, games, Thai and international sports

Standard H 3.1 Understanding and possessing skills in movements, physical exercises, games and sports.

Standard H 3.2 Appreciating and acquiring habits for physical exercises, games and sports; strictly adhering to disciplines, rules and regulation; respect for right and sportive spirit; possessing competition consciousness, and appreciating sportive aesthetics.

Substance 4: Building up health capacity and sickness prevention

Standard H 4.1 Appreciating and possessing skills in health building, good health maintaining, sickness prevention and capacity strengthening for health.

Substance 5: Safety

Standard H 5.1 Preventing and avoiding risking factors and behaviors, accidents, use of drugs and narcotic and violence.

**Art*****Substance 1: Visual arts***

- Standard A 1.1 Creating imaginative visual arts, creativity, art review and critical analysis; freely transferring emotions and thoughts about art; appreciating and applying art in daily life.
- Standard A 1.2 Understanding visual arts, history and culture relationship; appreciating visual arts cultural heritage, local wisdom and Thai wisdom.

Substance 2: Music

- Standard A 2.1 Understanding and creatively expressing art of music; reviewing and analyzing its value; freely transferring emotions and thoughts about music; appreciating and applying music in daily life.
- Standard A 2.2 Understanding music, history and culture relationship; appreciating music cultural heritage, local wisdom and Thai wisdom.

Substance 3: Performing arts

- Standard A 3.1 Understanding and expressing creativity by performing arts; reviewing and analyzing their value; freely transferring emotions and thoughts; appreciating and applying performing arts in everyday life.
- Standard A 3.2 Understanding performing arts, history and culture relationship; appreciating performing arts cultural heritage, local wisdom and Thai wisdom.



Career and technology

Substance 1: Living and family life

- Standard C 1.1 Understanding, creatively thinking, acquiring skills, moral and consciousness concerning utilization of natural resources and environment; in works for living and family life involving household chores, agriculture, crafts, creative works and business.
- Standard C 1.2 Acquiring work management skills and procedures, group work; search for knowledge, competence in problem solving; love to work; positive attitude about works.

Substance 2: Career

- Standard C 2.1 Understanding and possessing skills and experience in right occupation; possessing morality, positive attitude about career; visualizing ways and means to occupy honest profession.

Substance 3: Design and technology

- Standard C 3.1 Understanding technological nature and procedures; applying knowledge, wisdom, imagination, and systematic thinking for design and inventing utensils; understanding technological strategies and procedures; capable to make creative decision on technological choice for up-grading life, social activities, environment, work and professional world.

Substance 4: Information technology

- Standard C 4.1 Understanding, appreciating and applying information technology to search for data, to learn,



to communicate and to solve problems; working and earning living with morality efficiently and effectively.

Substance 5: Work and career technology

Standard C 5.1 Applying technology for work, producing, designing, solving problems; for creating careers and honest vocation; formulating strategic plan; and thinking creatively.

Foreign languages

Core curriculum for foreign language learning is English which is required for all levels until graduation. As for other foreign languages e.g. French, German, Chinese, Japanese, Arabic, Pali or neighbor countries' language groups, educational institutions may formulate subjects and learning procedure management as appropriate.

Substance 1: Language for communication

Standard F 1.1 Understanding listening and reading processes; capable to interpret message derived from listening and reading all kinds of written words from various media; capable to apply knowledge critically.

Standard F 1.2 Possessing skills for language communication, for data, information and ideas exchanges; capable to apply technology to express feeling and manage learning processes appropriately.

Standard F 1.3 Understanding speaking and writing processes; communicating data, opinions and concept of various subjects creatively, efficiently and aesthetically.



Substance 2: Language and culture

- Standard F 2.1 Understanding language and own culture relationship; utilizing language and culture as appropriate to time and place and other factors.
- Standard F 2.2 Understanding the similarity and difference between the language and own culture and those of Thai; utilizing language intelligently and with consideration.

Substance 3: Language and other subject groups relationship

- Standard F 3.1 Utilizing foreign languages for studying other subjects; own self developing and broadening the world view on language bases.

Substance 4: Language, community and world relationship

- Standard F 4.1 Possessing skills in the use of foreign languages to encounter different situations within and outside educational institutions, community and society.
- Standard F 4.2 Possessing skills in the use of foreign languages to acquire knowledge, to work, to earn living, to stimulate co-operation and to live together in society.

Stipulated standards for learning each subject group, at different grade levels will be printed in Basic Curriculum B.E.2544 documents, which explain in details about scope, substance and standards for each grade level.

Learning management

National Education Act B.E. 2542 Section 22 stipulates guidelines for learning management that education shall be based on the principle that all learners are capable of learning and self-development, and are regarded as being

most important. Therefore, teachers, instructors and administrators must change their roles from guiding and knowledge transferring to helping, promoting and encouraging learners in acquiring knowledge from various media and learning centres. They shall provide correct information to learners for use in creating their own knowledge.

Basic education curriculum management emphasizes training for intelligence and thinking process development which shall result in learners' creative and critical thinking ability. Moreover management shall also focus on emotion control development by instilling awareness on own self value, understanding one self and others, building up capability to solve emotional conflicts appropriately and effectively.

Thailand and other countries around the world are confronting social crisis; in particular those related to conflicts in thought and deeds of individuals, organizations and whole society. Therefore, educational institutions must emphasize learning for realization of situations, of ways and means to redeem undesirable issues, in particular those pertaining to religion and culture.

There are variety of substance procedures and methodologies. Instructors must, periodically and continuously, focus their attention on individual learners' total development:- i.e. body, intelligence, learning methodology, interest and ability. Therefore, different forms and methodologies shall be applied in each level learning management, emphasizing actual teaching-learning situation, self learning, group learning, and learning from nature, from actual practice, and integrated learning. Researches shall be integral parts of learning processes; similarly, learning academic subject shall be integrated with moral issue. Attempts shall be made to integrate the following procedures in teaching learning of all subjects:-i.e. management of environment preservation and development, thinking, and scientific analysis. Such integration of different subjects and learning procedures stipulate common goals, and learner centre focus. Integration



may be within the same subject group or otherwise. There are different forms of integration.

1. Integration by one instructor

Individual teacher may link one theme or one subject concerned real life or stipulated subjects. For example environment with water. Linkages between various subjects and learning procedures may also be undertaken e.g. reading, writing, calculating, critical thinking on certain issues, enabling learner to apply skills and learning procedures in acquiring knowledge about stipulated field.

2. Integration by two and more instructors

Two and more instructors jointly work out integration to teach one specific theme or subject, on parallel activities basis. For example, teaching about certain subject may be undertaken by one science teacher and one mathematics teacher, or one science teacher and one art teacher; one mathematics teacher about distance measurement by shadow measurement, the art teacher about technique of drawing shadowed picture.

3. Multi-disciplines integration

Subjects from different groups are integrated to replace normal learning management by each individual instructor teaching each subject or each subject group separately. For some topics such as environment, different teachers may jointly arrange learning processes together. Thai language teacher prepares Thai language learning about environment terms, science teacher works out scientific research on environment, social studies teacher assigns lessons or group activities about environment, health education teacher arranges activities pertaining to preserve healthy environment.



4. Integration by project learning approach

Learners and instructors jointly create a project for integrated teaching learning. The project will run continuously, as many hours of learning time for each subject put together. Different subjects are combined to achieve common goals. This is learning teaching as a team. In the event it is necessary to emphasize skills for particular subject, learning management can be singled out, such as music camp, English language camp, art camp and so on.

Guidelines for each grade level learning management

The first level, primary grades 1-3: Learning management must respond to learners' interest, taking into consideration development psychology and learning psychology. Each time-frame should not be too long to hold learners' interest. Thai language and mathematics must be integrated with all subject groups. Emphasis must be placed on actual learning, actual practice, and learning enjoyment. Humanity development shall include basic communication skills, mathematical and critical thinking, characteristic and aesthetic development.

The second level, primary grades 4-6: Similar with learning management level 1, the difference lies in provision for wider choice to fulfil learner's interest. Focus will be on promoting group work skills; integrating learning, project learning and application of themes with the aims to foster skills in thinking process, search for knowledge, own self creating body of knowledge, and creative production in order to exchange knowledge and skills with others.

The third level, secondary grades 1-3: Management of learning more difficult, more complicated and intensive subjects. Those having difficult and complicated theory and substance may be isolated. More emphasis shall be laid on projects leading to understanding and own self identifying capability and



aptitude, and readiness for careers. Educational institutions shall arrange appropriate learning atmosphere.

The fourth level, secondary grades 4-6: More specialized subject learning management shall be focused; emphasizing fulfillment of learners' capability, aptitude, needs, in depth thinking concerning careers and further education.

Learning management for non-formal and lifelong education may be made flexible to suit the needs of individuals, community and educational institutions.

Learning materials

In supporting basic education objectives which focus on promoting learners to be self-taught as well as enhancing education management to be flexible and responsive to the needs of individuals, community, society and country. Learning materials, learning centres including networks, shall be provided, in particular materials for self-taught. Learners and instructors may produce and develop learning media, learning materials may be screened and intelligently selected for reading. Textbooks should cover all subject areas for whole level. There must be adequate numbers of printed materials. Arrangement must be made to facilitate book borrowing from learning material centres or libraries.

There must be different types of materials:- publications, natural objects, and non-printed ones. Learning materials should stimulate valuable learning, attract attention, be thought provoking, easily and quickly understandable; should motivate skillful search for knowledge; broaden learning scope, in depth, and continuously. To achieve learning management goals which are to motivate earnest learning, guidelines on utilizing teaching learning materials for learners' development are formulated as below:-



1. To produce and utilize locally available materials for learning media.
2. To study, search and research for development of materials which are suitable for learners' learning procedures.
3. To produce and acquire media for learners' study, and for strengthening instructors' knowledge.
4. To study media selection methods and efficient use of different kinds of media in line with learners' learning procedures, nature of learning subjects, and individual difference.
5. To study analysis procedures, and standard evaluation of produced and selected materials. Regular analysis and assessment must be undertaken.
6. To establish effective learning centres within educational institutions and community for studying, researching and exchanging learning experience and learning material development.
7. To establish learning network for learning linkage and exchanges among educational institutions, communities, and other societies.
8. To arrange for periodical motivation, follow up and assessment of application results of learning media.

Learning measurement and evaluation

Measurement and evaluation are procedures to be used by instructors for learner quality development. The outcomes of these two activities are data and information concerning learners' development, progress and achievement, as well as data useful for promoting learners' full development potential.

Educational institutions shall formulate principles and guidelines of learning measurement and evaluation to be applied by all concerned. Educational institutions shall accumulate outcomes of learning measurement and evaluation at all levels:- classroom, own institution, educational district, whole country, as



well as those conducted by outside evaluators. These are evidence to confirm learners' quality to satisfy everybody concerned inside and outside educational institutions.

Classroom measurement and evaluation are conducted to find out results from management of learning activities, whether learners have actively gained knowledge, been instilled moral behavior and desirable value. Therefore, various methods shall be used, emphasizing substance relevancy and appropriateness to learners' learning process. These two activities may be continuously conducted in parallel with learners' learning process. Measurement and evaluation processes shall cover conduct, behavior, learning procedures, activities participation, project work or portfolios. Important users of classroom measurement and evaluation files are learners, instructors, parents and guardians. They must jointly stipulate goals, procedures and search for information as well as rules and regulations required for reflecting and restricting learning procedure outcomes. Learners will understand group's as well as individual learner's needs. Subsequently they are able to arrange grade score, or to form learners groups, and own self-learning management evaluation. Parents and guardians can find out learners' level of achievement.

Educational institutions stipulate evaluation principles, with approval of educational institution committee.

Educational institution measurement and evaluation shall be conducted by the institutions to check learning advancement in each class, each grade level and each year. Relevant information shall be used as guidelines to up-grade teaching-learning processes, and for assisting learners to meet learning quality standard. Each class and grade level assessment shall also be used for learners up-grading. In the events of learners' failure to meet standards in any subject groups, educational institutions must arrange remedial teaching and administer learning evaluation.

National measurement and evaluation shall be conducted at the end of the last year of each grade level learning, i.e. primary grade 3, primary grade 6; secondary grade 3 and secondary grade 6. Educational institutions shall make arrangement for learners to be evaluated in significant subject groups, i.e. Thai language, mathematics, science, social studies, religion and culture, English language and others as stipulated by the Ministry of Education. Data received from evaluation process shall be used for each educational institution as well as for learners' quality development.

Criteria for passing each grade level and basic education graduation requirement

Basic education curriculum requires 12 years of learning. Graduation can be achieved at 2 periods, namely at the end of secondary grade 3, which is considered completion of compulsory education and secondary grade 6 - completion of basic education.

Criteria for passing each grade level

Learning standards for grade levels 1, 2 and 3, namely primary grades 1-3, primary grades 4-6 and secondary grades 1-3 (Completion of Compulsory Education) are:

1. Learners must study 8 subject groups, and complete education in accordance with the criteria stipulated by educational institutions.
2. Learners must pass evaluation in accordance with the criteria stipulated by educational institutions in the areas of reading, thinking, analyzing and writing.
3. Learners must pass evaluation of desirable character in accordance with the criteria stipulated by educational institutions.
4. Learners must participate in learner development activities in accordance with the criteria stipulated by educational institutions.



Learning standards for grade levels 4: secondary grades 4-6 (Completion of Basic Education) are:

1. Learners must study 8 subject groups, and obtain units in accordance with the criteria stipulated by the curriculum.
2. Learners must pass evaluation in accordance with the criteria stipulated by educational institutions in the areas of reading, thinking, analyzing and writing.
3. Learners must pass evaluation of desirable character in accordance with the criteria stipulated by educational institutions.
4. Learners must participate in learner development activities in accordance with the criteria stipulated by educational institutions.

Education record documents

Educational institutions shall produce learning achievement evaluation documents needed for measurement and evaluation as deemed necessary such as learning achievement records, learner development forms in each subject, individual quality development record forms, cumulative records on development in different areas, forms for displaying outcome of desirable character development.

As a rule, there shall be common forms and types of documents to be adopted by all educational institutions. These will be useful for common understanding and transference. These documents are learning achievement record, education qualification document, report form on completion of Compulsory Education and Basic Education. Guidelines for preparing such documents will follow.

Learning result transfer

Learning result transfer may be undertaken by educational institutions. Knowledge, skills, learning experience in any forms of education,

and professional work may be transferred as equal to learning outcomes of any subject at particular level learners are studying. Transfer shall be based on:-

1. Records on learning achievement, data and information about learners' acquired knowledge and skills;
2. Knowledge and direct experience, tests, interview etc.
3. Competency and accomplishment.

This shall be in accordance with the ministerial rules and regulations.

Teachers' potential development

Educational institutions shall be responsible for refinement and development of professional instructors. This shall be executed by, at first, analyzing various systems of the institutions concerning their weakness and strength, learning teaching systems, measurement and evaluation, instructors' competency, aptitude, interest, and attitude about learning/teaching. Data and information derived shall form bases for continuous teachers' potential development, for stipulating criteria to develop teachers, in undertaking various functions such as group learning teaching, tutorial activities, curriculum development, and guidance. These require systematic procedures, supported by effective factors and various innovations. There shall be systems of sharing experience for mutual benefits, between learners and instructors to accelerate effective learning system.

Teacher's potential development aims at creating academic leadership and competency in conducting research for learning development. Co-operation shall be sought from leading teachers, model teachers, higher educational institutions such as Faculty of Education of universities and Rajabhat Institutes and professional organizations. Teachers shall be trained on curriculum development, management of basic education learning procedures which apply effective learning standard for measurement and evaluation. Formulation of basic education curriculum needs decisions from educational institution administrators, teachers, parents, guardians, community and local wisdom leaders.



Educational institution curriculum management

1. Educational institution curriculum

Educational institutions are academic resource centre for seeking knowledge. Therefore each educational institution shall formulate own curriculum which comprises all about learning and other experience planned for learner development. Basic learning substance and each subject, additional subjects for each year or each semester, semesterial learner development activities and criteria of desirable character shall be formulated. These shall be based on the *core basic education curriculum standard* which is essential in educational institution curriculum management.

2. Educational institution curriculum objectives

Below are two guidelines to be strictly adhered in formulating curricular objectives. Educational institutions shall undertake this action in co-operation with families, community, local authority, temples, governmental and non-governmental institutions and organizations at local level.

2.1 Educational institution curricular objectives shall be to develop enjoyment in learning which is moving force and motivation to highest degree of development in academic area. In the same time, educational institution curriculum shall aim at accelerating mental and physical strength, self confidence and positive interest, through arrangement of learning experience. Learners shall enjoy freedom in learning and working, individually as well as in group. Fundamental skills to be inculcated are: - literacy, numeracy, information and communication technologies, searching for knowledge, and systematic thinking procedures.

2.2 Educational institution curriculum shall also aim at spiritual health, morality, social relationship, and cultural awareness development in particular learners shall be able to differentiate wrong from right, to understand and be firm in their belief and faith, to understand cultural and religion difference

including their impact on individual and society. Educational institution curriculum shall also aim at developing morality of learners who will be encouraged to freely acquire knowledge and experience for self- inculcation of responsible citizenship. They shall be trained to take part in developmental social activities, in such areas as justice and equality. They shall be aware of their environmental sustainable development at all levels:- individual, community, country and the world. They shall be well prepared for making right decision as the well informed, independent and responsible consumers.

3. Formulation of educational institution curriculum

The curriculum shall respond to social and economic changes as well as changes in nature of education. Instructors shall adjust their teaching and evaluating procedures accordingly, in order to fulfil ever-changing needs of learners and to encounter ever-changing situation in economic, social and cultural spheres. Education progress can be achieved when curricular adjustment and adaptation are continuously undertaken to respond to needs and necessity.

3.1 Vision

Education vision shall be formulated to foresee and to meet social changes around the world. Subsequently, educational institutions shall adjust or adopt curriculum to prepare learners of the time. Vision shall be formulated with co-operation of community, parents, teachers, learners, business enterprises, governmental and non-governmental organizations at community level as well as the educational institution commission. Vision expresses ultimate expectation from educational institutions, responsible for jointly stipulated fundamental missions, goals, standards, strategies, work plan, follow up activities and report to public. Public responses to reports shall be used by educational institutions to consider and to take appropriate activities in accordance with the educational institution curriculum and national basic education standards.



Co-operation mentioned above is moving force for effective implementation of strategic plan formulated, motivating creative attitude towards educational institutions. Co-operation also creates right attitude in networking systems and supporting organizations. It makes possible to establish complete set of systems e.g. standard, curriculum, substance for learning, teaching learning, learning materials, measurement and evaluation, follow up, report on learning data, joint research, instructor supporting system and so on. Co-operation will also lead to curriculum adjustment, stipulation of learning substance and themes which respond to needs of the community.

3.2 Curriculum management

In line with formulated vision, objectives, and learning standards, educational institutions shall stipulate learning substance for each grade level, annually or by semester, together with expected results. They are meant for instructors to apply in designing learning programme, integrated learning projects, time-frame, work or project assignment, portfolio, all which are jointly planned by all members of the educational institutions. It is the curriculum, which includes responsibilities and all aspects of education management of the educational institutions.

3.3 Stipulation of learning substance and expected outcomes for each year or each semester

Educational institutions use learning standards at grade level from basic educational core curriculum as basis to stipulate those of educational institutions, bearing in mind necessity for relevancy with their learning standards and materials, measurement and evaluation, local wisdom, community resource centre, integrated learning methods, subject learning kits or projects to be stipulated.



3.4 Teaching learning procedure design

From learning substance and expected outcomes, annually or semesterially, educational institutions shall assign every instructor to design teaching learning procedures which include expected outcomes and substance for each grade level e.g. the first level; primary grades 1,2,3, mathematics substance 1: number and numeracy; standard M 1.1 to understand number exposition diversity and application in real life. Standards for mathematics learning at the first level, primary grades 1, 2, 3 are numerical conclusion and awareness about numbers, including zero. Learning expected outcomes are, for example, ability to count 1-100 and more etc. Teaching learning procedure design shall aim at learners' development in 4 areas:- knowledge, thinking process, skills and right attitude towards mathematics and society.

3.5 Time-frame and number of units

For nine years of compulsory education, it is necessary to arrange basic education to cover all subject groups, emphasizing learners' development of skills in reading, writing, numeracy, systematic thinking, and computer literacy. Subject based learning/teaching methodology shall be applied. Topics chosen for learning shall be suitable for local situation and shall be selected from science or social science curricula , and be integrated with other subject groups on equal basis. Equilibrium of various topics and time-frame must be maintained.

The first level, primary education grades 1-3 and the second level, primary education grades 4-6, time-frame for learning various subjects, annually, shall be appropriate and conform to necessity for focusing on building up basic skills such as reading, writing, mathematics and critical thinking. In particular, at the first level, arrangements shall be undertaken to ensure enjoyment in learning. Time allocated for each subject shall correspond to learners' interest or otherwise, instructors may use learning activities such as writing and producing books.

At the first level, instructors must be knowledgeable in child



psychology for teaching/learning, in order to fulfill their interest. They must be able to integrate various subject groups to satisfy children's curiosities, while focusing on inculcation of basic skills stated in previous paragraph. For the second level, group learning/working shall be introduced for learners who, at that stage, have acquired group learning experience. At this level, it is important to conduct topic-based teaching. Main topic may be sub-divided into many small topics. Learners may be assigned to search for information and knowledge about each sub-topic. Thus, learners can apply research methodology to build up body of knowledge, as stated in the National Education Act B.E.2542. Results of portfolio can be displayed to enable learning about one another's works.

For the third level, secondary education grades 1-3, last part of compulsory education, the aims are to develop efficiency, attitude and interest. Educational institutions shall review all subjects in 8 groups gained so far by learners in accordance with each level learning standard. More subjects integration in project form shall be arranged. Gateway to professional world to fulfill local and national needs shall be opened to learners. Towards this end, instructional innovation and arrangement for learners' work experience shall be executed. Language learning may also be made one of the gateways to careers. Learners shall be explained and convinced about knowledge-based society in future. Perfect learning atmosphere and environment shall be created as good example for society. Additional subjects or projects shall be formulated to respond to learners' interest and aptitude.

For the fourth level, secondary education grades 4-6 which is last part of basic education, learning arrangement shall be undertaken to prepare learners for higher education or career. Therefore learning focus shall be strengthening aptitude and learning interest in particular subject or project.

3.6 Guidelines for educational institutions' curricular arrangement

To effectively achieve learning objectives, the following guidelines shall be applied by educational institutions.

3.6.1 Stipulation of substance

1) To stipulate expected learning outcomes, annually or by semester, upon standard for learning substance in each subject group. Learning outcomes cover knowledge and capability of learners after one year or one semester of learning completion.

For honor courses, educational institutions may stipulate expected learning outcomes as appropriate and relevant to subjects to be offered.

2) To stipulate learning substance, annually or by semester through analyzing expected learning outcomes in item 1. Learning substance must be in line with substance and standards for grade levels, local and community environment and needs.

3) To stipulate time-frame and number of units for annual learning substance and basic education substance as well as those stipulated in addition by educational institutions. The following guidelines shall be used.

- For the first level, primary education grades 1-3; the second level, primary education grades 4-6; the third level, secondary education grades 1-3; annual learning substance and time-frame must be appropriate and in line with learning standards and substance.
- For the fourth level, secondary education grades 4-6, annual learning substance and number of units must be appropriate and in line with learning standards and substance.

Stipulation of number of units to be offered in each semester shall be the following ratio:- 40 hours of learning in each semester is equal to one unit.

For additional or special courses for professional and other special programmes, the ratio is:- 40-60 hours in each semester is equal to one unit. Educational institutions may establish substance as appropriate and utilize the same principle.

4) To prepare course description which comprises name of the course, time-frame or number of units, learning standards and contents of



such courses. Expected learning outcomes, learning substance, time-frame and number of units stipulated in item 1, 2, 3 shall be applied for proposing course description.

Title of each course must be the same as learning substance groups. Titles of additional courses established by educational institutions can be stipulated as appropriate, bearing in mind, communicative effects, relevancy to contents of such courses.

5) To design units, annual or semesterial learning substance shall be integrated and divided into units and sub-units, in order to facilitate learning management, and to provide holistic approach to learners. Each learning unit consists of learning standards, substance, and time-frame. After course completion, learners will achieve expected goals, on annual or semesterial basis.

Learning unit may comprise integrated subjects within one or a number of learning substance, or special topics within one substance, or integrated subjects pertaining to learners' ways of life. Due consideration must be given to learning standards of various substance relationship. For management of learning units, at least one project shall be assigned to learners to undertake.

6) To establish learning plans for teachers and learners. The plans shall be based on course description, learning units, on annually or semesterial basis.

3.6.2 Management of learners development activities

Arrangements shall be made for every learner to take part in learner development activities, in appropriation with age, maturity and individual difference. Considerations shall be given to the following factors:-

1) Development activities aim at supporting learners to acquire experience in different forms of learning methodologies such as project oriented, and to gain body of knowledge in all subject groups.

2) Due consideration shall be given to learners' and communities' interest, aptitude, needs, potential and competency. Academic group is one example.

3) The goals of development activities are to foster consciousness on being useful to society. Examples are boy scout and girl guide groups.

4) Development activities include social welfare services, beneficial work experience for self and society.

5) Systematic measurement and evaluation shall be undertaken, and shall be regarded as criteria for passing grade level.

3.6.3 Stipulation of desirable character

Desirable character shall be goals for development activities. Educational institutions, and community jointly stipulate criteria for determination of desirable character.

Desirable character criteria cover morality, right behavior and value. Educational institutions may stipulate goals and criteria as appropriate, in line with problems and necessity to inculcate three areas mentioned afore, in addition to learning substance in various groups.

For each semester or each year, instructors shall undertake measurement and assessment of learners' development. Considerate evaluation shall be applied with the view to improve and transfer learners to higher level. Evaluation shall be jointly undertaken by learners, parents and all concerned, annually or semesterially.

Educational institutions shall conduct measurement and evaluation of learners' development at every grade level. Progress information shall be used for stipulating strategic plan, enhancing further development to meet character development goals.

Educational institutions formulate methods for measurement and evaluation of desirable character development.

3.6.4 Research for learning development

Management of basic curricular learning consists of different forms and methodologies in order to respond to learners' aptitude, interest and needs. Instructors are required to integrate research procedures in



learning management for learners' quality development. Learners shall be stimulated to learn and to be able to apply research procedures for learning activities. Research procedures consist of series of actions in respective order, namely problem analysis, establishment of plans to solve problems or to create development activities, implementation of plans, data collection, research output conclusion, report and utilization of research result.

Supervision, follow up, evaluation and report

Effective systems shall be established for supervision, follow up, evaluation and outcome report. This requirement is in line with important principles for educational institutions' basic education curricular management, necessitating co-operation of all concerned in society who have been empowered for teaching-learning management. They shall be jointly responsible to produce learners whose qualifications meet standards and expectation of the community and society at large. All concerned, therefore, shall be informed of progress, problems, and obstacles. They shall be given opportunities to co-operate, assist, encourage and support planning and implementation of plans to achieve high quality education management. Supervision, follow up, evaluation and report are parts of quality assurance mechanism to meet standards. The execution of these activities shall be in network form. Members of the network consist of ministerial and non-ministerial organizations, at all levels-national, educational district and educational institutions. A committee shall be established, consisting of persons from all levels, and professions. Education outcome reports at all levels shall be distributed widely to all concerned and public at large, in order to identify ways and means to achieve higher quality.

In order to achieve authentic quality, education management evaluation must be conducted at all levels: national, educational district and educational institutions.



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