

National Mathematics Curriculum in Lao PDR

Presented by : Mr. Outhit THIPMANY

**Research Institute for Educational Sciences (RIES),
Ministry of Education and Sports, Lao PDR.**

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1. Introduction

Curriculum Development

3 eras of curriculum development

- **1976: Educational Policies**
 - One-step forward for education
 - Education as Nationalism, Scientism, and Public Domain
- **1994: Response to National Economic Change and Advance of Internationally Information Technology**
 - National Education is step-by-step equivalent to internationally education standard
- **2007: Pertaining to National Economic Development Plan toward 2020**
 - Strategic Plan on Human Resource Development 2020
 - Strategic Plan on Educational Development 2020

1. Introduction (Con.)

- National mathematics curriculum is an official document, and is reference for all mathematic teachers to define the contents, teaching/learning objectives and assessment standards.

- National mathematics curriculum provided the general concepts for Mathematics textbooks and assessment standards.

- In Laos RIES responsible for developing curriculum, textbooks and teacher's guides, and assessment standards.

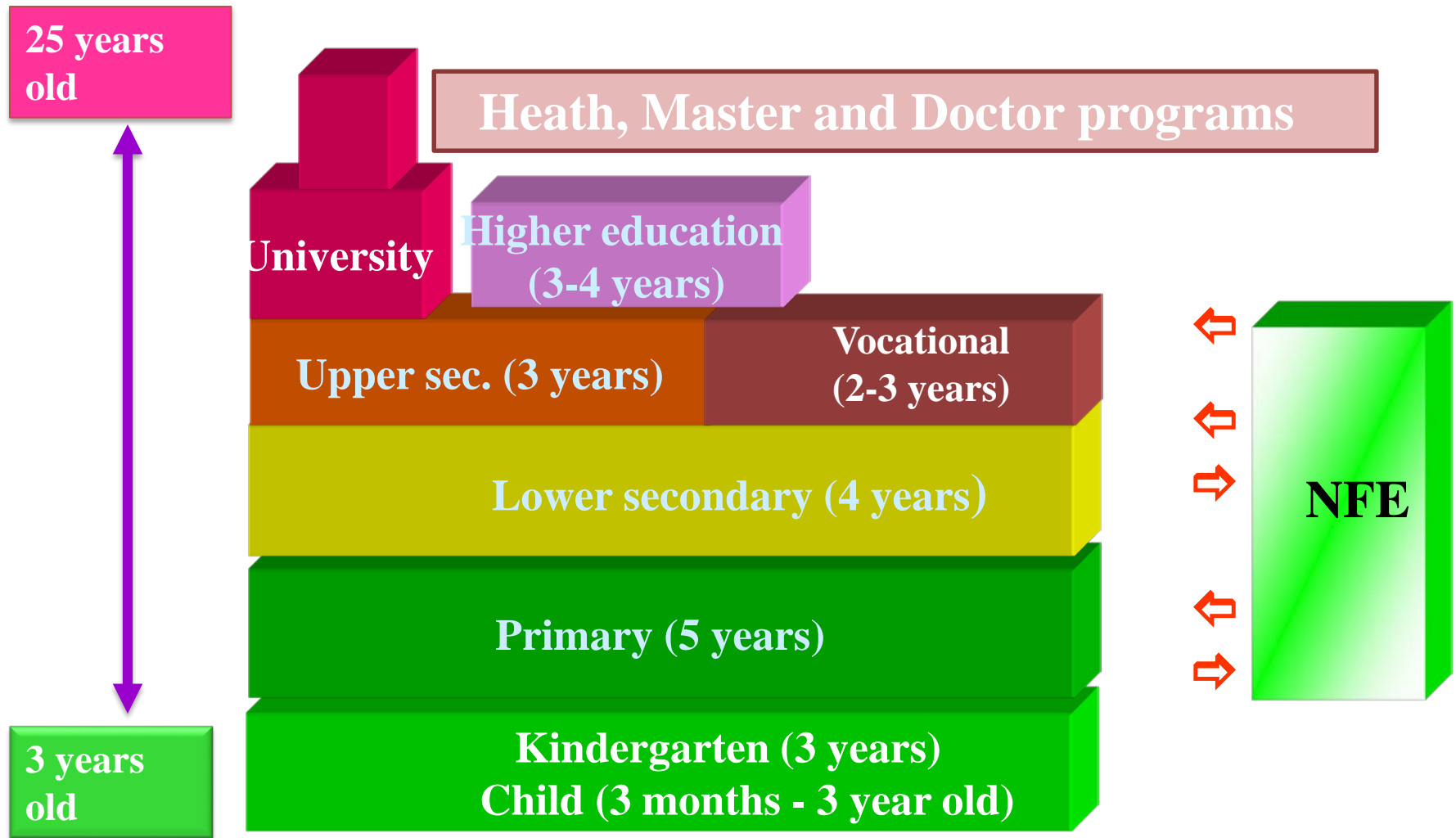
- Developer team for the curriculum, textbooks and teacher's guides consists the mathematics specialists from DPPE,DSE, DTT, NUOL, General Schools, and RIES.

-In Laos have national assessment or graduation examination is held at the end of primary (grade 5), lower secondary (grade 9) and upper secondary education (grade 12).

The end of upper secondary have the national test.

1. Introduction

Laos education system



School system is **5-4-3-4**(Start from 2010)

Primary education is compulsory

2. Mathematics Curriculum

Time

- Time Allocation for Mathematics in Elementary Education

Grades	Standard time of a class period	Standard number of class periods per year and per week (year/week)
1	45 min	99/3
2	45 min	132/4
3	45 min	165/5
4	45 min	198/6
5	45 min	198/6

35 weeks/year

- Time Allocation for Mathematics in Lower Secondary Education

Grades	Standard time of a class period	Standard number of class periods per year and per week (year/week)
6	50 min	132/4
7	50 min	132/4
8	50 min	132/4
9	50 min	132/4

33 weeks/year

2. Mathematics Curriculum

Time

- Time Allocation for Mathematics in Upper Secondary Education

Grades	Standard time of a class period	Standard number of class periods per year and per week (year/week)
10	50 min	136/4
11	50 min	136/4
12	50 min	136/4

34 weeks/year

2. Mathematics Curriculum

The Characters of National mathematics curriculum

- National mathematics curriculum consist as **Goals/Objective, Time, Contents and basic standards learning, Teaching Methods, Teaching Materials, and Evaluation.**

- The goals of the mathematics curriculum education in Laos is to ensure Students also develop mathematical knowledge and skills to apply in other subjects, and to use in higher levels of study, and also emphasized knowledge, skills and attitudes.

-The contents

- primary education has 4 strands as Numbers, calculations, Geometry/Data, and Measurement;
- lower education has 3 strands as Arithmetic/Algebra, Geometry and Statistics; and
- upper secondary education has 4 strands as Algebra, Analysis, Probability and Geometry.

2. Mathematics Curriculum

Learning standard of National mathematics curriculum

- For example the learning standards in mathematics for lower secondary education

Domain: **Arithmetic/Algebra**

Sub-domain: **Number sense**

Topic: **Power**

Sub-topic: **Calculation of Power**

a) **Presenting the power**

b) **Properties of power**

c) **Simplifying of power**

Learning Standard:

1. **Discussing the terms bases and exponents**
2. **Presenting the powers with integral bases (excluding base 0) and whole number exponents**
3. **Calculating the powers with integral bases (excluding base 0) and whole number exponent**
4. **Using properties in order to simplifying of expression powers**

3. Issues and Direction of Curriculum Reform

- The objective is not clear
- There is the problems about domain connection (School stage, Grade, Subject, Contents)
- Learning standards is not clear
- Revise the objective, Domains, and Learning standards

- Main contents (Domains) for Primary Education

Japan	Laos	
<p>The mathematics subject has 4 parts such as:</p> <ul style="list-style-type: none"> A. Numbers and calculations, B. Quantity and Measurements, C. Geometrical figures, and D. Quantitative relations 	<p>The mathematics subject has 4 parts such as:</p> <p style="text-align: center;">Current</p> <ul style="list-style-type: none"> 1. Numbers 2. Operations 3. Geometry/Data 4. Measurements 	<p>The mathematics subject has 4 parts such as:</p> <p style="text-align: center;">New</p> <ul style="list-style-type: none"> 1. Numbers and Calculation 2. Geometrical figures 3. Measurement 4. Quantitative relations

- Objectives for Primary Education

Japan	Laos	
<ul style="list-style-type: none"> • Interests/ Attitudes/ willingness • Mathematical thinking, • Presentation Skills • Knowledge and Understanding 	<p style="text-align: center;">Current</p> <ul style="list-style-type: none"> • Knowledge • Skills • Attitudes 	<p style="text-align: center;">New</p> <ul style="list-style-type: none"> 1. knowledge 2. Mathematical thinking 3. Skills 4. Attitudes

References

- **Mathematic curriculum in Laos (2007, 2009, 2010)**
- **Current Mathematics textbooks for primary and secondary education**
- **Onekeo NUANNAVONG (2008)**

Thank you very much