

# Teaching Mathematics at Different School Levels in Developing Countries

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*Abstract:* In this paper we discuss several aspects of teaching mathematics at different school levels in developing countries. The situation in the three levels, namely elementary, primary, and secondary schools is illustrated stressing the negative aspects in each level. A proposal for measures to remedy the

negative aspects of teaching mathematics at all three school levels in developing countries is then given.

*Key-Words:* Teaching Mathematics– School Levels – Developing Countries – Negative Aspects – Remedy Proposal

## 1 Introduction

Some negative aspects of teaching mathematics at elementary, primary, and secondary schools in several developing countries are briefly discussed. A proposal for future measures is accordingly given.

In Section 2 the current situation of teaching at the three school levels in several developing countries is given.

The negative aspects of teaching mathematics at all three school levels in developing countries are illustrated in section 3.

A proposal to remedy the negative aspects is discussed in section 4.

In section 5 our recommendations for the future are given.

Finally the conclusion is then briefed in section 6.

## 2 Current Situation in Developing Countries

To study the current situation of teaching in general in developing countries we have to consider following differences:

Governing systems, economic situation, total population, area, and geographical location, differ largely between several developing countries.

Standards of teaching in schools, ratio of number of schools to total population, percentage of non-alphabetical people also differ in many developing countries.

Technical and financial support of developed countries depend mainly on political aspects (see [1], [2]).

## 3 Negative Aspects of teaching mathematics at the three School Levels in Developing Countries

The main negative aspects of teaching mathematics in elementary, primary, and secondary schools are as follows:

### 3.1 General Aspects

Governing systems are trying to keep low standard education to avoid raising free thinking young students. Also not to decrease the numbers of non-alphabetical people especially in developing countries with high population.

The curricula and textbook in the departments of education are not up-to-date. Also the students

joining those departments are usually among the weakest graduates from the secondary schools as working as a teacher does not include good financial income and high social status.

Many poor people do not send their children to school and send them to work and earn extra money to help their parents.

Economically weak developing countries usually do not give education high priority in their budget planning.

Financial and technical support of developed countries is usually quite limited to effectively help the sector of education in developing countries (see [3], [4]).

### 3.2 At School Levels

Differentiating between different school levels is necessary:

#### 3.2.1 Elementary Schools

In this extremely important level of elementary school one of the main problems is the limited interest of some of the governments at this level and the ignorance of many uneducated parents.

The teachers appointed are the weakest compared to those appointed in primary and secondary school levels who are also weak.

Many teachers are graduating from universities have out of date education departments in terms of curriculum and textbooks used.

The classes are usually over-populated with limited facilities.

Many young students spend long time on games and internet.

#### 3.2.2 Primary Schools

Not recognizing the problems created in the elementary school.

Many teachers are graduating from universities having out-of-date education departments in terms of curriculum and textbooks used.

Several teachers use unrevised strategies and emphasizing memorization rather than thinking.

#### 3.2.3 Secondary Schools

Not recognizing the problems created in the primary school.

Many teachers do not prepare the students for their continuing studying at higher education.

Not stressing visualization and imagination skills as well the important critical thinking.

## 4 A Proposal to Remedy the Negative Aspects

### 4.1 Generally

The governments of developing countries must give highest priority to education at all levels.

States and private universities must invest more money and intensify the process of raising the standards of education in their countries.

The curricula and textbooks at departments of education at state and private universities should be periodically updated.

The percentage of non-alphabetical population should be drastically decreased, if not completely eliminated.

### 4.2 At Different School Levels

The profile of the three school levels differs. Each of the elementary, primary, and secondary levels is to be considered separately as follows:

#### 4.2.1 Elementary Schools

The teachers for elementary schools must be chosen very carefully as they are responsible of giving the students a successful start in their educational road.

The decrease of the number of students in each class is a necessity to be able of following the students' development individually.

Special tutoring for socially needed students and parents should be held.

#### 4.2.1 Primary Schools

Teachers must recognizing the problems created at elementary school level.

Updating the curricula and textbooks is a necessity.

Stressing critical thinking and avoiding memorization.

Motivating the young students at this level to have good attitude towards learning.

#### 4.2.1 Secondary Schools

Recognizing the problems created at elementary and primary schools is necessary by all teachers.

Educating the teachers to have updated teaching methods and strategies.

Emphasizing critical thinking and stressing visualization and imagination.

Teachers must prepare the students for the study at universities and/or beginning a professional career.

## 5 Recommendations

Due to the extremely important role of education in the development of developing countries, the governments must system which enhance high standards of education through updating the curricula and textbooks, as well as considering more financial support in their budget in education.

Highly recommended is decreasing the percentage of non-alphabetic population.

Training all school teachers at all school levels, especially in elementary schools.

The curriculum and textbooks at departments of education at state and private universities should be periodically updated.

The number of students in all classes must be decreased through providing more schools and appointing more educated teachers.

In the primary and the secondary levels teacher must recognize the negative aspects of teaching at the lower school level respectively

In all school levels critical thinking and visualization should be stressed by all teachers..

Textbooks should be written by scientists in developing countries which take into consideration the political, sociological, economic, social and cultural aspects in their countries

## 6 Conclusion

More support of the governments in developing countries to education in all school levels is highly recommended.

Training teachers in all school levels is very essential achieve high standards of education in developing countries.

Updating the curricula and textbooks at all departments of education at state and private universities.

Teachers must stress critical thinking and visualization.

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