

The Necessity of Promoting the Syllabus, the books And Practices of Education and the Linking Of Educational Substance to the Values of Society A viewpoint introduced by:

Dr. Mustafa Ahmed Saleh Gubari,

Head of Science and Mathematics Unit At the Educational Research and Promotion Centre Aden - Republic of Yemen & Head of Mathematical Section At the College of Education, Dala

The world today is passing through a time full of new discoveries and thoughts and no doubt, the new millennium will uncover more and more the new knowledge un-known to us so far.

Mathematics had been the milestone of all inventions and knowledge which has been uncovered so far in the past generations and will no doubt play a key part in the future inventions.

It is therefore very essential for us to introduce precise mathematical syllabus that will suit the forthcoming millennium, onward to the future.

There are specialists and other concerned people in various countries who are working on this subject, and the difficulty which they face is what to choose from the vast knowledge of mathematics that has already been uncovered and which has been tried, in the different parts of our life; and how to put forward and simplify this knowledge for the easy absorption of the future generations.

This matter requires the revision and promotion of the syllabus and selection of the proper extractions necessary for the forthcoming generations and also the proper ways of explaining the subject .

Mathematics of the new millennium should have the power to reflect the understanding which has to be embodied in the educational syllabus as that of residential education, the environmental education, health education and the human rights of the people and the society as well as the traditional understandings of the society concerned.

In many countries of the world the teaching system is connected with the availability of the student's syllabus book as well as the teacher's guidance book which helps the student and the teacher simultaneously to understand the subject concerned, specially when no other modes are available to absorb the required knowledge, and it as well helps in self education.

I feel it necessary to promote the educational syllabus and, therefore, I want to draw your attention in short to the following:

- The syllabus understanding
- The necessity of syllabus development and the aims of this development.
- The necessary mathematical knowledge for the generation of the century to come.
- The characteristic of the school book and the teacher's guide.
- An example of mathematics' share in enforcing the values in the society.

The definition of syllabus:-

There are a number of definitions for the syllabus, some define it as the school book, others say it is what the students study, but many consider it as all the experiences to which the student is exposed in and out the school - Here in my paper I will present the well known definition for Tailor : The syllabus is a document that contains the following four elements :-

- 1- Aims - 2- contents - 3- The methods and visual aids of teaching -4 -assessment

It's obvious that the syllabus in any country depends on the aims of the educational philosophy , for this country , which in many cases depends on the following fundamentals :

- The fundamental and ideological belief of the country .
- The social fundamentals.
- Psychological Basic.
- The fundamental knowledge

And it is necessary to reflect all these fundamentals in the contents of the subject and the methods of teaching .

The necessities of the syllabus development :

- The urgent changes in knowledge , science , environment and society .
- The modernization of the syllabus to satisfy the current needs of the individual and society .

Among the Aims targeted by this development are the following:

- The promotion of the intellectual skills and the skills of solving the problems.
Considering the individual differences together with the (self education .)
- The syllabus must contain the different current values which concern: population, environment, society, health and belief .
- Linking the theory with application and moving from the tangible to the semi - tangible and then to the abstract.

The minumim mathematical knowledge required for the coming century :-

According to my own point of view we make use of all the previous experiences and concentrate on choosing the minumim mathematical fields which help us in solving our current problems and we make sure that they are fully understood by the coming generation.

The required fields are :

- Knowledge in Arithmetic.
 - Knowledge in Algebra .
 - Knowledge in Set Theory .
 - Knowledge in Statistics and Probability.
 - Knowledge in Analytic and Plane Geometry .
 - Knowledge in Differentiation and Integration.
 - Knowledge in Computers , Calculators and the Internet .
- The different mathematical knowledge applied in modern equipment which may be needed by the individual in his environment and his society .

Teaching Procedures:

With regard to the procedures of teaching , the people concerned in this field have reached a very advanced level and have found that it is very important to link these procedures to the stage of growth .

Many scholars have stressed this point and above all we should not forget the teaching of Islam which considers this point as very important and which rendered legal assignments to man linked to the stages of man's growth .

Many of the Islamic scholars have stressed this point , to mention some of them : Abu hamed Alghazali and IBN KHALDOON. Also there are western scholars like Bruner and

Beyaget , who have done research in this field. But these scholars have left the specialization field open for the specialized individuals, each in his own field. In Poland for example there was a school of the famous scholar Sofia Krygowska from Krakow who has found a different way of teaching , and named it the occupational way of teaching mathematics . This method is worthy of concern and perusal. It may help in teaching mathematics at the beginning of next century. Among the present personalities in this conference, there is Professor Stefan Turnau who is teaching at present in this school :

In this paper I would like to demonstrate a mathematical example which proves that mathematics can contribute in establishing different concepts in the Society . This complies with the orientation in making the curriculum contents embody many concepts. And at the same time it helps students to learn.

The Student's Book and the Teacher's Guide Book:

It is very essential that books should be written by groups of scholars. This group should consist of scholars who are specialized in the following :

- Teaching Substance.
- Teaching Procedures.
- Teaching aids.
- Psychologists.
- Linguists
- Book Issuing Experts

This is one of the examples to introduce the integer number

A certain teacher of mathematics requested his students of the fifth primary class to attend for the maghreb prayers in one of the mosques during the holy month of Ramadhan and requested them to bring 10 pieces of dates each , the students brought the dates as per the table mentioned below :

Students	No, of dates	In comparison with the no. of dates requested
HAMZAH	13	3 DATES MORE
BILAL	14	4 DATES MORE
KHALED	8	2 DATES LESS
SAEED	7	3 DATES LESS
YASSER	10	THE REQUESTED DATES

The teacher then proposed the following table :

Students	No, of dates	Comparison of the requested dates with the one brought by the students
HAMZAH	13	+3 or 3
BILAL	14	+4 or 4
KHALED	8	-2
SAEED	7	-3
YASSER	10	Zero (0)

The teacher changed the word more by the (+) sign , and the word less by the (-) sign and the word as requested by zero (0) .

- Here the teacher tried to explain to the students that the numbers with the (+) sign and the numbers with no sign are positive numbers , and the numbers with the (-) sign are negative numbers. The number (0) represents neither positive or negative that is neutral. The teacher explains to the students that the two signs (+) and (-) in the above example have another meaning and they have no relation to the arithmetical operations, addition and subtraction. Then the numbers are represented on the numbering line by the teacher, indicating the position of the zero on the line. The teacher then names these numbers for the students defining them as being the integer numbers.

With regard to the subject of the book, it should contain the following:-

- Description of the subject.
- The subject of the book should be according to the educational motives.
- Different skills.
- The language of the book should be in accordance with the language level of the students.
- Sequence of Information and the linking of same together.
- Appraisal (Type of questions and exercises).
- Teaching Aids, their suitability to the students, simplicity, accuracy, attraction and size .
- The useful items which show how to use the book (introduction, directory, list of words, scientific words) .

With regard to the teachers guide book , it should contain the following items :-

It should show the teacher the aims, and how to use the guide book, explaining the new topics and guide him to choose the best way and visual aids, skills and suitable questions for every lesson or point.

As I have mentioned before it is very essential to bear in mind how to promote the syllables and the importance of using suitable ways of teaching which can comply with our everyday needs, as well as a suitable school book with definite specifications. With all this in hand we can help in promoting the teaching of mathematics in the next century.