

## ON THE ENHANCEMENT OF CREATIVE & INDEPENDENT AWARENESS OF PRIMARY SCHOOL PUPILS

Le Hai Khoi

Institute of Information Technology, Hanoi – Viet Nam

### Introduction

The first Vietnamese class of the secondary school for gifted pupils in mathematics was established 40 years ago, in 1965. Nine years later Vietnam participated in the 16<sup>th</sup> International Mathematical Olympiad (IMO) in Germany, and got 1 Golden, 1 Silver, and 2 Bronze prizes. It was rather good debut for the newcomer country in the history of IMO. Over the past 30 years, Vietnam was very proud of the high results at IMO. However, it seems that many of laureates didn't have high achievement in their university study, and therefore, they would not become scientists in the future as expected. It turned out that during many years the pupils have been trained in the way of "fighting-cock", which could not promote the creative ability in the next education process.

Certainly, to become a real scientist, pupils and students are required to have a lot of factors from ability of thinking, really creative aptitude to conditions, working and studying means, etc. One necessary thing considered is that how to cultivate the ability of independence and creativity for pupils from the first grades of the schools.

Therefore, it is necessary to start a process of innovative teaching and enhancement for primary school teachers, that makes changes in the awareness of teaching staff to self improve teaching quality, thereby to improve independent and creative awareness of primary school pupils.

There are different points of view on Education Reform so far. Many people agreed on the necessity of permanent and consecutive reform in the content of textbooks, which is suitable with the development of sciences and technology as well as with the development of historical and social issues. These people assumed that after graduating, pupils and students must be equipped with enough necessary knowledge which is suitable with the development of sciences and society. However, some others said that after each reform, their children became "testing mice".

Therefore, the aim of the process said above is to establish a standard program for primary school teachers, and thereby, to contribute to the enhancement of education quality at primary level.

Nowadays, in Vietnamese primary schools, even in Hanoi and Ho Chi Minh City, pupils are trained by the method "professor dictates, students write, and do exactly what professor says". A class is evaluated as a good one if all pupils silently listen to their teacher, raise their hands in the right way when they want to present their ideas

to establish this lecturer, etc. This regulation is applied in all schools for all pupils from the first to the last, fifth grades.

It's known that primary level is the basic level in the educational field. However, all pupils are trained in such a way that we unintentionally created a generation of machinelike pupils.

Following the program, at the beginning of January all pupils must take the examination for the first semester within one week with 9 testing disciplines. Certainly, after (learning) each discipline an examination is necessary. However, the existing issue is how to establish a good program for evaluating pupils' knowledge. If the testing program for the first semester for the first and the second grades is the same with the program for the third, the fourth and the fifth grades, then all pupils will feel afraid and that method is unnecessary, or in some case it becomes "unscientific".

It turned out that in some primary schools, the teaching method is not pedagogic at all, and it doesn't stimulate pupils' independence and creative thinking.

In order to prepare for the next examination, all pupils must revise all their lessons under the instruction of their teacher. For Literature of the fourth and the fifth grades pupils are instructed to learn by heart all revised texts, because the question should be one of them. To prepare for the exams of Maths of the first grade pupils, after finishing two classes at school, pupils must do their homework until 10 or 11 pm with 8 to 10 Maths exercises and 2 to 3 pages of writing exercises. Some of them become crying in learning. The above issue is one example of the best primary schools in Hanoi and Ho Chi Minh City. That is the problem of primary schools in big cities. The question is what about the status of primary schools in the whole country, or at least in the remote areas?

Therefore, it is necessary to start a project on knowledge enhancement for primary school teachers that establishes a standard program. Knowledge and skills are necessary criteria to improve comprehensive education quality in schools nowadays. These criteria link closely together in order to create the real quality for primary level, especially to train one independent, creative and active youth generation.

It's difficult to get out of all existing teaching method as well as of all thinking which become a bad habit right now. But we must change them. It's impossible to let all pupils to continue an obligatory, inflexible and uncreative curriculum. Certainly, pupils must be provided enough knowledge to become laborers who have suitable capability in regional areas and in the world. Therefore, capability and knowledge of teachers must be improved in order to teach and communicate to their pupils. So, It's necessary for all teacher especially the first form teachers to self improve their level, knowledge on the surrounding world, at the same time make reference to other teacher's method though which teachers can build the most scientific teaching method for themselves in order to promote the independence and creativity of pupils, and to create a good habit just in the first form pupils.

## Teaching and test using softwares

We will present a software “I Study Mathematics” for the first grade of primary schools.

There are 3 parts:

- 1) Numbers within 10
- 2) Numbers within 100
- 3) Relax with logic thinking

In the first two parts there are exercises/problems pupils should do/solve, and they can check their answers by clicking on the icon “View the result”. Also pupils can redo these exercises/problems.

It is special with the third part. Here there provide different problems that require a logic thinking.

### 1. PART ONE: “Numbers within 10”



## 2. PART TWO: “Numbers within 20, and 100”

### 2.1. Numbers within 20

The screenshot shows a software window titled "CÁC SỐ TRONG PHẠM VI 20". On the left, there is a vertical menu with two options: "CÁC SỐ TRONG PHẠM VI 20" (highlighted in orange) and "CÁC SỐ TRONG PHẠM VI 100" (in red). The main content area has a yellow header "Các số trong phạm vi 20" and a list of topics:

1. Từ số 11 đến số 20 .
2. So sánh hơn kém bao nhiêu đơn vị .
3. Cộng trừ không qua 10 .
  - Các Số Hạng \_ Tổng .
  - Số Bị Trừ \_ Số Trừ \_ Hiệu .
  - Một Tổng cộng với một số .
  - Một Tổng trừ đi một số .
  - Một số trừ đi một Tổng .
  - Tìm một Số Hạng trong một Tổng .
4. Cộng trừ qua 10 .
  - 9 cộng với một số \_ 8 cộng với một số .
  - 7 cộng với một số \_ 6 cộng với một số .
  - Tìm Số Bị Trừ
  - 11 trừ đi một số \_ 12 trừ đi một số .
  - 13 trừ đi một số \_ 14 trừ đi một số .
  - 15 trừ đi một số .
  - Tìm Số Trừ

At the bottom, there are navigation buttons: "TRỞ VỀ MENU" and "TÌM TRẮNG". The Windows taskbar at the bottom shows the date 2/1/2006, time 3:53:37 PM, and several open applications.

### 2.2. Numbers within 100

The screenshot shows a software window titled "CÁC SỐ TRONG PHẠM VI 100". On the left, there is a vertical menu with two options: "CÁC SỐ TRONG PHẠM VI 20" (in orange) and "CÁC SỐ TRONG PHẠM VI 100" (highlighted in red). The main content area has a yellow header "Các số trong phạm vi 100" and a list of topics:

1. Chục \_ Trăm .
2. Cộng các Số Tròn Chục .
3. Trừ các Số Tròn Chục .
4. Phép cộng không nhớ trong phạm vi 100 .
5. Phép trừ không nhớ trong phạm vi 100 .

At the bottom, there are navigation buttons: "TRỞ VỀ MENU" and "TÌM TRẮNG". The Windows taskbar at the bottom shows the date 2/1/2006, time 3:59:05 PM, and several open applications.

### 3. PART THREE: “Relax with logic thinking”



Here is an example. There are 15 bees among them only one bee could already find a “room” within the matrix of rooms. It is known that rooms of bees are not adjacent, and the number shows the quantity of bees on the line. Find the rooms for all bees.



**Em Học Toán** **Giải trí**

Ô Trở về Menu Giải trí X Thoát

**Bees** **Nhưng Chú Ong tìm nhà !**

4/1/2006  
10:24:16 PM

Gợi ý  
Giải đáp  
Chơi lại từ đầu

5 0 3 0 2  
0 3  
2 0 2  
1 2 1 2  
2 2 2 2 2  
2 1 2 1 2

Start | APEC Conf | Teaching Mathematics in ... | 10:24 PM