



The Global Math Circle

Dakar Teacher Training Institute

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Select Testimonials

Note: Several of these are translations from French to English.



Before coming I did not know what the Math Circle was. I thought it was a training where I would be taught new rules on how to teach math.

I used to think that competition is one of the best ways to encourage learning because it pushes students to do the best to outperform others. With Math Circle I understood that it is not about results - we should not give the results, something which seemed difficult to me at the beginning of the training. This later became very pleasant because one witness that the children are happy to come up with their own answers together, getting along very well together.

What I would like to use in my classes from Math Circle is this idea of not telling learners that their results are wrong and above all to highlight the discussion before which helps create understanding, before writing any lesson. Finally there is one thing that I used to do in my classes, which I also saw being done in the Math Circle, which is letting students call the teacher by my first name, so this is a practice which I will continue.

I have always loved mathematics and Math Circle has only reinforced that love. I thank Tifin and Masake. Tifin for coming here to share her experiences and to have allowed us to have another vision of mathematics: mathematicians as philosophers, thinkers ... Mathematicians discussing mathematics out of love of the subject.

I thank Masake for organizing this training and for inviting us to this wonderful experience and to all the participants who shared their knowledge. I learned a lot, thanks to everyone.

- B. Sambou, *college student*





The Global Math Circle



The idea I had of "Math Circle" was that it would be a kind of meeting that brings together math lovers to expose and discuss methods of calculation. I had even brought a notepad with me to note interesting formulas.

Once I joined the group and the more we participated in the activities, I realized that I would not be applauded for my ideas nor blamed for my incompetence.

Let me give an example:

In one of the activities, when Masake gave a problem set, I easily solved many of the problems, and I heard some others complaining about the difficulty in resolving question # 3 where there was an "@" as an operation. For me, it was the easiest to solve and I told myself that, come time for corrections, it would be I who would correct this particular problem on the board and explain it more clearly than possible, just as a real teacher would do.

But against all odds, we stopped after question # 1, which we discussed together and did not even completely correct. All this led me to understand that the idea was not to show others the correct answer but to generate consensus through discussion.

The methodology of Bob and Ellen which have marked me the most are:

- Never refusing a child's response

Not singing the praises of the child who gave a "good" answer so as to keep the class in a healthy atmosphere, without creating some who are "excellent" and others "mediocre."

Before coming to the institute, I considered math as a subject to learn merely to fulfill academic requirements. I now find, through "Math Circle", that I can, whenever I want, engage mathematics and children's thinking by asking questions.

- F. Diop, *college student*





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Before coming to this training, I was really nervous about how the 3 days would go. I imagined a lot of things. I thought that the Math Circle was like every other math activity: that we were going to learn new things about mathematics, new formulas perhaps ...

Once at SABS, I found all ages, college students like me, elementary teachers, high school teachers... There were also different nationalities. This proves the universality of mathematics. I was a little reticent because I was one of the least experienced and certainly the youngest compared to the other participants who, by the way, were very welcoming. We met Masake and Tifin. Then I had a chance to understand the pedagogy of Bob and Ellen Kaplan.

I now have a new perception of mathematics, one based on discussions and exchange. I can say that the math circle has far exceeded my expectations. It's an important experience for me. What strikes me most about this method is the fact of not telling the student that he or she is wrong, and she or he is allowed to think and scramble around to find the right answer.

After this experience I see that solving problems in math is not just calculations, it is also the discussions it generates. This reinforces our passion for mathematics. I really thank the founders of Math Circle, it was a pleasure and an honor to discover the Math Circle.

- N. Filor, *college student*





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Before I came to attend this training, I wondered why anyone would think of inviting me to an event on mathematics. Actually, I am not fond of maths unless it is related to money, accounting or banking. Then the history of the Math Circle held my attention for a moment, because despite my phobia of maths, my presence has to be of some use since The Math Circle is defending a noble cause.

Beyond all of my expectations, I saw I could, through their sessions, help students develop much more skills in terms of mental gymnastics. I could spare them what happened to me: what made me hate maths before.

Moreover, the culture of TMC is providing me with is suitable if applied while I am teaching because if we focus only on its positive aspect, we have to admit that less kids would feel uncomfortable or even scared of learning in such kind of communities.

To be honest, Mathematics has never been my cup of tea. With everything I have acquired in terms of additional knowledge, I feel more like learning further details about any math theory I have heard of.

The world needs TMC to create an environment that matches most of the kids and mostly inspires teachers to be more patient with them. This has to be spread world wide!

- **D. Diop, elementary school, first year teacher's assistant**





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I thought, when I read the invitation to participate in the Math Circle I thought that it would be about contests for elementary kids. After attending the workshop, I realised through the brainstorming sessions that this institute was mostly about a new approach to teaching math. I greatly appreciate the ideas of the Math Circle for many reasons.

First of all I think that one of the main reasons that math teachers do not enroll a large number of students is the stiffness in their ways of teaching and their incapacity to diversify their pedagogies.

Many teachers use only one way to explain the same thing and approach solving problems the same way. Secondly, I like that the Math Circle prohibits competition: it helps avoid creating an elite out of a group of students who are motivated by winning, being first or even being looked upon favorably by the teacher. On the other hand, the fact that there is not necessarily an urge to find a right answer right away can encourage students to feel less pressure in giving answers and more committed to the process of finding the answer.

Finally, what seems to be amazing with the Math Circle is that it creates a dynamic which allows everybody to share their own way of seeing things.

- M. Faye, *elementary school teacher*





The Global Math Circle



At first I did not want to attend the training because of the dates. After some reflection, I decided to attend, thinking the Math Circle would be based on a specific curriculum and above all that it would give us more material and tips to better help our students understand and improve their math skills.

On the first day of the training, I felt lost in front of the given problem solving activity. Seriously - I asked myself: "what am I doing here?"

Then, thanks to the different questions and answers the discussion was made of, I started having ideas about the problem.

This training sessions has enabled me to draw a conclusion as far as teaching maths is concerned. The more opportunities you give to learners, the better you help them discover and strengthen their math skills.

I have learnt also that doing Math Circle helps everybody to discover other life skills we often do not know about ourselves. Math Circle works as a form of personal development as long as all learners are given a chance to have a say on a given problem. Moreover, it helps you think about how to prove or demonstrate the things you say.

Through such activities, we initiate ourselves in the art of convincing.

- A. Djimera, *elementary school teacher*





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Before attending the institute I thought the training would be about mathematics hints to reinforce my math teaching procedures. I also imagined that there would be a variety of activities through which participants and trainers would share information.

The main difference between my expectations and my experience is the how of things; the way and approaches for a good math circle.

If the Math Circle is what I think I have understood (an environment of information sharing where the teacher participates less and gives the learners the opportunity to say what they think about a given problem), then I will adopt the idea of the Math Circle during my lessons because it would help me reach all of them.

Another function of a math circle is psychological. It helps the kids get rid of the idea that math is a hard nut to crack. They will accept math rather than rejecting it.

- **M. Seck**, *elementary school teacher*



At first, I thought the Math Circle would be about introduce learning math through playing, because in my institute we learn through playing.

I have gained a little experience which can be useful in the future. I would like to use the method of not telling rules or answers to the child, but instead leave him/her to think and solve any situation given to them. Before, maths seemed very hard to solve, but now I know it is all about thinking, because everything in the world demands thinking and calculating, which is mathematics.

- **V. Diedhiou**, *museum learning through play instructor*





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I thought that math circle was a new approach and different strategies on the way we teach. Math Circle was for me, a place where we learn different pedagogical methods to enhance our teaching.

It was unexpected to experience an approach where teachers are not giving all the answers or questions. Students talk more than the teacher. We let them talk more than we do. They will give back their own questions or answers. Teachers will not have any negative feedback on the way students answer questions. Some of the main ideas to retain are:

- 1) Not to give the answers
- 2) Give students guidelines
- 3) Talk less than the students.

- **C. BA, middle school teacher**



When I received the invitation, I was expecting a teacher training on how to better teach mathematics in their classes.

I was expecting a method that allowed children to have a creative and imaginative mind through training based on observation and analysis of problem. The reality of the training is different from my expectations in the way or the purpose of math circle is not to install academic math skills. I have the impression that it is recreational mathematics to allow participants to discuss interesting mathematical topics, to have fun with maths. Still, the Math Circle can have several applications in classroom, notably through its approach (make students think and find the answers on their own), and the discussion, which allows for clarification of mathematical notions and concepts.

- **M. Ka, mathematics educator**

