IDENTIFYING OBSTACLES TO SOLVING A MATH PROBLEM

3.3.2000 Today I used the Ambitious Target Tool in a totally different way with my P6 Remedial Math group. I will only be able to tell if what I did today would reap any tangible results next Tuesday, 7.3.2000. I plan to teach my pupils how to construct triangles, given: 1. the lengths of all 3 sides of the triangle OR 2. the lengths of 2 sides of a triangle and the angle where both these lines meet at a point. 10 minutes before the end of the lesson, I asked the pupils to construct a triangle ABC with sides AB=6 cm, BC=7 cm and Angle ABC=60o.

Of course I knew they would not be able to do it. That was exactly what I wanted them to tell me. And tell me they did! " Why? What are your problems?" I asked. And as they told me why they could not construct the triangle for me, I put them down as obstacles first. After that, I asked them how we could overcome those obstacles. Below was the very simple Ambitious Target we came up with.

THE TARGET OF OUR ACTIVITY: We can construct a triangle given the lengths of 2 sides of a triangle, and the angle between them.	
Obstacles	*Intermediate Objectives*
1. Nobody has a compass.	1. Everyone has a compass.
2. Nobody has a protractor.	2. Everyone has a protractor.
3. Some don't have rulers.	3. All have rulers.
4. We don't know how to do it.	4. We learn how to do it. Mrs Wong teaches us how to do it.

After that, I said, "Since we need a lot of instruments that we do not have today, I guess we have to keep this activity for my next lesson with you. So, can you tell me what everyone needs to bring for our lesson on Tuesday next week? And they rattled off all that they needed to bring. "Thank you," I said, "I am sure we would not face all these obstacles in the next lesson because you all know exactly what to bring to overcome all these obstacles, right?"