

Reflections on The International Mathematical Olympiad 2007 in Vietnam

by
Tan Weiyu Colin and Teo Wei Hao



From left:-
Wei Hao, Colin, Joel, Zhao Yan
(who is our 'unofficial observer'),
Thoa (nanny of the 6 kids),
Bryan, Jia Han, Wei Quan, Gar Goei,
Boon Leng, Lei Lei, Mr Lee Siew Tong
(our deputy leader).

The International Mathematical Olympiad (IMO) was held in Vietnam from the 19th – 31st of July 2007. I represented Singapore as an Observer, along with Joel Tay and Teo Weihao. This was my second time as Observer.

The result of five Bronze medals was a good one, considering that the team was relatively young. The students and leaders attributed such a uniformly good performance to the systematic training that we Observers had given them throughout the year. I – and I am sure the other Observers are too – am proud to receive such a compliment.

The coordination went relatively smoothly. In the IMO, the marks awarded to student's solutions are decided in coordination sessions. In these sessions, representatives from the student's country and a pair of coordinators agree upon a mark to award the student. Having three Observers this time – the previous time, I was the only Observer – to share the burden of analyzing the student's scripts made the work easier all round. Splitting

the examination problems according to our areas of expertise made it easier for us to focus. The Singapore International Mathematical Olympiad (SIMO) professors had also asked us to mark scripts for various internal quizzes as well as for competitions at the national and regional levels. This put us in good stead.

While three of us handled only two examination problems each, our team leader, Dr Tay Tiong Seng, had to look at all six problems. I certainly admire his ability to concentrate for long periods of time and his skill in sizing up the overall situation, probably acquired from his many years of being a team leader.

Having three Observers meant that our temperaments complemented each other in our dealings with the students. Joel, being bright and energetic, often addressed the mathematical issues that the students brought up. Weihao was concerned with the well-being of the students and how they were handling the stress of the competition. On my part, I urged the students to

put the competition in perspective, to remember that there was much more in their future after the competition, regardless of their results.

This IMO was very well planned. Caps and umbrellas were provided to deal with the hot and humid weather. When needed, it was easy to move between locations to meet other members of our team. The Vietnamese volunteers took to their assigned jobs dutifully, ensuring all our needs were taken care of. They anticipated our need for hydration and set up a very efficient and systematic logistical system to transport mineral water! We never ran out of water and I applaud them for that. The Vietnamese are an industrious people. I learnt that the Vietnamese volunteers had to take both an English test and a test about the geography, history and culture of Vietnam. The result was a group of guides, many of whom were students majoring in foreign studies or tourism. They were patriotic about their country and had specialized skills in meeting our needs. The Vietnamese are a wonderful people.

I love nature and was very happy that the coordination site was at Halong bay. This bay was listed as a world heritage site by the United Nations Educational, Scientific and Cultural Organization in 1994. Dr Tay's room had a good view of the bay and we spent many happy hours there analyzing the student's scripts. On a tour of the Descending Dragon's Cave, I was pleasantly surprised when one of our tour guides, Giap, picked up a Coke can that probably had been lying there for ages. Upon my query, Giap, a tourism major, told me he did so because he had pride in the natural beauty of Vietnam. I suddenly gained a profound respect of him. With the upcoming Integrated Resorts (IRs) in Singapore, it is my deep wish that all Singaporeans would pick up some of Giap's spirit in putting Singapore in the best light.

In our interaction with the other participating teams, our multi-lingual and multi-racial experience in Singapore helped us to facilitate communication in large group settings. We helped as translators between the Asian and European teams. Coming from a developed city with an Asian heritage, we helped bridge the cultures of the East and West. We could understand the Vietnamese culture and describe it to Western cultures in Western terms. For instance, the dragonfruit was a tropical fruit in season and appeared at every meal. Delegates from Slovakia, Belarus and Japan were quite happy listening to my description of the origins of the fruit's name!

I enjoyed my trip to Vietnam. It was a good competition and a good holiday. Thank you to all the Vietnamese people that made this trip such a pleasant one. I would definitely want to return to this amazing country again. Also thank you for the company of my fellow Singaporean delegates. Best wishes to next year's team and Observers!

Tan Weiyu Colin

I would like to start this recollection by thanking the people who are often not receiving enough credits. Even though the IMO is an individual contest, where the result a participant gets depends solely on his capability at that point in time of doing the paper, the result one achieves are not possible without the supporting team. Therefore I would like to take this opportunity to thanks the supporting team, i.e. all the Profs/Drs who have been with the SIMO team all these years, grooming and preparing us (include us observers when we were still participants) for the IMO; SMS, MOE and our Deputy Leader for their great support; NUS for the hosting of our training; my fellow observers for seeing through this year training syllabus together; and of course everyone in the SIMO training (kids who are not selected for IMO included) who contributed to the whole program by being there. We tackled IMO as a team, much like the big cast behind a movie starring 6 actors, and it would not be possible if any one of us did not contribute what we did. Thus, let us spend a brief moment to appreciate what each of us put in for the year before moving on to the next challenge. All the best to next year's cast!!

It is worth mentioning something unique about Singapore that we gathered from our friendly chats with deputy leaders and observers from other countries. We may be the only country capable of gathering all six representatives together in one place, training them for IMO the whole year round, due to the 'size' of our country. This makes it possible for Singapore to employ a team strategy, where our training incorporates much esprit-de-corp building between the 6 representatives, giving these people with a common goal a chance to learn from each other. This property eventually gives us an edge over other country, and at the same time bond us together like a big family. Thus let us continue to treasure this unique advantage, and to exploit it to create a stronger team in years to come.

The host country, Vietnam, is a historical and cultural place. The observers learned much from the people and history there, in just the few days of our stay. The people of Vietnam are very positive, busting with vitality and vigour. It surprised me that, though the standard of living in Singapore is much higher, Singaporeans seem to be grumpier and less tolerant. The people we interacted with most were the IMO guides, whom were mostly from a university in Vietnam that specializes in language studies and tourism. The below interesting conversation occurred between yours truly and one of the guides from Vietnam:-

Wei Hao : *"What is the most popular foreign language studies in your university... well of course other than English and Chinese?"*
Guide: *"Well that will have to be Japanese and Korean. Because we have many companies here that are from Japan and Korea, so it is useful to learn these language, which allows us to better communicate with them."*

I was so ashamed to tell them that I learned Japanese just for the sake of understanding animes and mangas (Japanese cartoons and comics).

This is one of the few examples I can quote that demonstrates a major difference between Singaporean and Vietnamese. One day, Singapore may hold our first IMO. I have absolute faith that despite being a small country, we are capable of organizing a world class event, providing our foreign friends with world-class hotel stays, world-class tours, world-class food, world-class competition environment for the participants, world-class transportation and infrastructure for the smooth running of the event, etc. Everything we provide will be up to world-class standard. However, are we able to provide world-class guides, people who are passionate of Singapore, who are able to introduce our country to our foreign friends, who are courteous and willing to meet seemingly "unreasonable" requests from demanding foreign friends? We see a lot of such people in Vietnam though...

Well onto a lighter note, I would like to comment abit on the aftermath after math, i.e. what happened after the participants finished their 2-day IMO paper. What really caught my attention is the mark allocating system of IMO, which is most interesting and efficient. Firstly I would like to include a brain teaser for us:-

Two misers who are good friends went to the bar one day. Since it is cheaper to buy 1 jug of 700ml instead of 2 mugs of 350ml beer, they bought a jug, shared the cost evenly between them, and then proceeded to distribute the jug of beer into 2 empty mugs. Now both of them being the very miser they are, they are not willing to get less than what they paid for. Come out with a strategy that they can employ to minimize possible quarrels.

Notice the similarities between the 2 miser friends and both factions in IMO script marking, namely individual countries and IMO panel. Each participating country would not be satisfied having their participants getting lesser marks than what their solutions are worth, as it will affect their rankings. The IMO panel, on the other hand, is not willing to give more marks than needed, so as to set reasonable benchmarks and standards for the competition. However if the marking of scripts is done using traditional approach, i.e. teacher have full decision over marks, then there will bound to be a lot of quarrels, since it is not always very clear how much a solution is worth. Also this approach is slow, as the markers have to read every script very carefully to avoid unnecessary quarrels later on. Since there is only 2 days allocated to marking of scripts (the cost of organizing IMO would skyrocket if the number of days were to increase, and surely nobody wants that to happen), an efficient method has to be designed. This method is known as coordination, which involve both parties marking scripts. Then a time window is allocated to each country per IMO question.

Within this time window, the countries will propose a mark for each of their participants. The IMO panel will then agree or disagree. Every disagreement will be debated, until a compromised decision is met. This way, both factions will get what they want, while finishing the whole motion in a mere 2 days is made possible.

So next time if we see two miserly friends in a bar, tell one of them to pour the beer into both mugs, and let the other person choose which mug he takes. The person who pours the beer will naturally make sure he is satisfied with whichever mug leftover for himself, while the other person choose his mug so he has nothing to complain about, QED.

Teo Wei Hao