

## IMO: Saudi Arabia Tries to Improve Performance

Abdulaziz S. Al-Harhi  
Olympiads General Supervisor, Mawhiba

Fawzi A. Al-Thukair  
IMO Saudi Team Leader, King Saud University and Mawhiba

The participation of the Kingdom of Saudi Arabia (KSA) in the International Mathematics Olympiad (IMO) started in 2004 as an activity of the Ministry of Education. In the five-year period from 2004 to 2008, the performance of the Saudi team was not satisfactory, to say the least. The highest score obtained was 8 out of 252, and the team ranked last of all participating countries.

In 2009, the Ministry of Education decided to transfer the responsibility of preparing for the IMO to Mawhiba, a semi-government establishment caring for gifted and talented students. Mawhiba is considered a semi-government establishment because it has an independent budget with a lot of flexibility to allocate funds to its program, yet it is presided by the King of Saudi Arabia, with the minister of Education as Vice President. Mawhiba cares for the gifted by funding programs to enhance their talent, by cooperating with elite schools in organizing extra colloquium activities, and by sending students to well-known international centers to participate in special programs and interact with gifted students from other countries. The need to transfer the responsibility of the IMO program to Mawhiba was evident because of the realization that improving the competitiveness of the KSA team will aid in stimulating math education in the country both directly and indirectly.

Mawhiba set up a program with the help of a number of Saudi universities, King Abdul Aziz City for Science and Technology (KACST), Saudi ARAMCO, and Qiyas (the National Center for Assessment in Higher Education). It was decided not to participate with a student team in IMO 2009, but to go as observers, to give Mawhiba time to reflect on the results of the previous years and to benefit from the experiences of highly competitive countries such as the United States, Vietnam, and Thailand. It was realized that the most important stages are the selection and training stages.

For the selection process, the results of the students on the national test of Qiyas were used, along with scores on the National Math Olympiad, run by KACST. The best 300 students were selected, and then a specially designed test was used to choose 60 students to be enrolled in the training camps of Mawhiba. The first training camp was held in the resort town of Taif in July 2009 for two weeks. Mawhiba enlisted the help of Dr. Titu Andreescu from the United States, who nominated Dr. Richard Gibbs to train in Taif along with local trainers. A test was given at the end of the camp to choose 40 students. After Taif, there was a series of five camps (including a short camp of three days in January 2010). Dr. Andreescu and Dr. Dorin Andrica joined the team of trainers in November and stayed for each camp thereafter. The goal of each camp is to train and choose a smaller number of students who can continue to the higher level of the next camp. By the end of February, there were 12 students left. Mawhiba decided to gather these students in Riyadh (the capital) and train them for three months continuously. This arrangement required the students' parents to agree

to let the students live away from them and study in a specially designed high school curriculum program. Another special arrangement had to be made with the Ministry of Education to transfer the credits of the students to their newly chosen school in Riyadh.

The trained students needed to compete with teams of other countries to measure their readiness for the IMO and to build up their confidence. The Balkan Mathematics Olympiad (BMO) was chosen. It was held in May 2010 in Moldova. On the basis of a series of tests given to the 12 trained students, 6 students were selected to participate in the BMO. The KSA team managed to get two bronze medals and three certificates of honorary mention in the highly regarded BMO. This result gave a strong boost to the students and the trainers to continue their effort preparing the team for the IMO. The last leg in the long journey of training took place in Taif for three weeks. After that, it was clear that we had reached a level at which we were confident that we could compete in the IMO. Our team managed to score a total of 55 points in IMO 2010, a huge jump from the 8 points in IMO 2008. We received two bronze medals and two honorary mentions.

Our score in IMO 2010 was good, but it was not good enough. We are aiming to improve our competitiveness through a better selection process and better training. We now have four levels of selections, starting from middle school. The training process will start from schools and then will proceed to the districts level. We are planning to hold various levels of competitions with the help of the Ministry of Education. We also need to improve the level of the local trainers through intensive training. A camp for trainers was held in April 2010, representing the beginning of a program envisaged to involve more trainers and build up their knowledge. Starting this academic year, 2010–2011, and having benefited from its positive experience in the preparing the mathematics team Mawhiba decided to participate in the selection and training of Olympiad teams in physics and chemistry. We believe that this horizontal expansion will enrich the experience and the education of scientific competitions in KSA and will certainly reflect positively on our educational strivings.