

## Brilliant Performance at 2019 International Mathematics and Science

### Olympiad :

## Award-Winning Students and Representatives of Trainer Professors Meet with President

(Courtesy of Hui-E Chen at the Division of Academic and Vocational Senior High Education)



Taiwanese senior high school students participated in eight competitions in six subjects at the 2019 Asian Pacific Mathematics Olympiad (APMO) and the 2019 International Mathematics and Science Olympiad (IMSO), and their outstanding performance has been witnessed. On November 14, 2019, President Ing-wen Tsai met with those award-winning students and representatives of the trainer professors at the Presidential Palace. Meanwhile, the Ministry of Education also held an award ceremony at the National Taiwan Science Education Center, at which Fan, Sun-Lu, Political Deputy Minister of Education, recognized the endeavor of the

award-winning students, trainer professors, as well as teacher-counselors and teaching assistants from senior high school.

During his speech, Zhong-Mou Li, Professor in the Department of Computer Science and Information Engineering at the National Taiwan Normal University, delivered on behalf of the trainer professors of all six subjects, mentioned that the students have established a solid foundation in their respective subjects. However, human or social issues could no longer be resolved with knowledge of a single subject, he advised that students should conduct more interdisciplinary learning at the university or postgraduate stage in the future, which would be helpful for their learning journey.

At the preliminary selection stage of 2019 IMSO, a total of 9,110 senior high school students signed up to participate in various competitions of IMSO. Through the semifinal, training camp, and final stages, 45 students were selected as national representatives. From May to September this year, these representatives participated in eight competitions that covered six subjects, namely APMO, the Asian Physics Olympiad (APhO), the International Mathematical Olympiad (IMO), the International Physics Olympiad (IPhO), the International Chemistry Olympiad (IChO), the International Biology Olympiad (IBO), the International Earth Science Olympiad (IESO), and the International Olympiad in Informatics (IOI). They demonstrated excellent performance in each competition in terms of international rankings and the number of medals won. In particular, at the 13th IESO hosted by South Korea, Taiwan's four representatives out of 163 participating students from 43 participating countries won three gold and one silver medals, ranking third in the world. Meanwhile, at the 30th IBO hosted by Hungary, Taiwan's four representative also won three golds and one silver, ranking fourth among 72 participating countries. The outstanding performance is truly obvious to behold.

In terms of the number of medals won, Taiwan sent 27 student representatives to participate in IMO, IPhO, IChO, IBO, IOI, and IESO in the UK, Israel, France, Hungary, Azerbaijan, and South Korea this year and won 13 gold, nine silver, and five bronze medals in total. In addition, another 18 students were selected to participate in APMO and APhO and won one gold, five silvers, eight bronzes, as well as four honorable mentions.

The award-winning students and trainer professors were honored and invited to meet with President. Sun-Lu Fan, Political Deputy Minister of Education, also presented awards on behalf of the Ministry of Education to give encouragement to the students and expressed gratitude toward the delegation of the trainer professors and teachers for their endeavor to lay a solid foundation for Taiwan's science education.

At the award ceremony held by the Ministry of Education this year, Professor Zhong-Mou Li delivered a speech on behalf of the training professors for the six subjects, stating that the students have established a solid foundation in their respective subjects; however, human or social issues can no longer be addressed with knowledge of a single subject. He suggested that students should conduct more interdisciplinary learning at the university or postgraduate stage in the future, which would be helpful for their learning journey. The other teacher who delivered a speech was Yue-Ning Li, Assistant Professor in the Department of Earth Sciences at the National Taiwan Normal University; she was the gold medal winner of the 1st IESO in 2007. After graduating from the Paris Diderot University–Paris 7 in France and receiving his doctorate degree in both astronomy and astrophysics at the age of 27, she was recruited by the Department of Earth Sciences of the National Taiwan Normal University to teach in Taiwan earlier this year while serving as a trainer teacher for the students participating in IESO and accompanied students abroad for the competition as a member of the delegation. This year, the host country of IESO was South Korea, the same as in 2007, so it was also of special significance to Ms. Li and the student representatives.

Ms. Fan said that in order to promote the vigorous development of science education in the international arena, a variety of Olympiad competitions in mathematics and science have been held at the level of high school since 1959. Taiwan has participated in the international mathematics and science competitions every year since its participation in APMO in 1991, as well as IMO in 1992, IChO in 1994, IPhO and IOI in 1994, IBO in 1999, APhO in 2000, and IESO in 2007. As of Today, Taiwan has brought home a total of 373 gold, 354 silver, and 247 bronze medals, as well as 118 honorable mentions, which has demonstrated the solid foundation of senior high school science education in Taiwan. Furthermore, Taiwan is situated at the top

tier of the international rankings, including in IPhO, IChO, IBO, and IESO, in recent years, and it has been, on average, among the top five in the international rankings during the past three years. Such an achievement has been recognized by all sides.

To fulfill its obligations as a participating country and improve the country's international visibility, in recent years, Taiwan has also hosted the 3rd IESO in 2009, the 11th APhO, the 22nd IBO, and the 26th IOI, and has been scheduled to host the 21st APhO in 2020. Through the process of organizing the competition, it is hoped that high school students' interest in participating in science competitions will be sparked so as to accumulate their learning competencies.

Moreover, due to the impact of a declining birthrate, the total number of students participating in the nationwide preliminary selection for Olympiad competitions has declined slightly over the past two years (8,082 in 2017 and 8,624 in 2018). The K-12 Education Administration has particularly promoted the competitions through the schools that were commissioned to organize the training sessions for the competitions in the six subjects earlier this year, the number of applicants has risen slightly to 9,110 as a result. As for the reward mechanism, Ms. Fan said that in addition to the existing preferential treatment for college admission and scholarships for schooling abroad, the Ministry of Education this year has added a subsidy on economy round-trip tickets, living expenses, and registration fees when award-winning students who attend international academic conferences and present their research articles, so as to motivate students to attend international academic conferences and present their research results, which, in turn, will help to expand their international horizons.