

The Science Society of Thailand and Its Role in Science and Technology Development in Thailand

Sumonta Promboon*

President, The Science Society of Thailand Under the Patronage of H.M.the King, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand.

* Corresponding author, E-mail: sumonta@swu.ac.th

ABSTRACT: The Science Society of Thailand was founded in 1948 to promote the development of science and technology in Thailand. The society currently has about 5,000 members, has 12 regional and subject area branches. It promotes research and cooperation in science through the organization of Annual Science and Technology Conferences, where some 900 papers are presented and some 2,000 participants attend. The society publishes one international research journal *ScienceAsia*, as well as a magazine *Science Journal* (Worasan Wittayasart) for members, teachers and students. The Science Society of Thailand was instrumental in obtaining approval to designate 18 August as National Science Day, and organizes nationwide activities for students in the National Science Week activities. It helps to honor Outstanding Scientists, Young Scientists and Outstanding Teachers, and Science Writers. The society also plays an important role in promoting public awareness of science through establishment of science museums, promotes professional development of science teachers, and is involved in various aspects in the development of science policy. Through these various activities, the Science Society of Thailand continues to play an important role in promoting the development of science and technology in Thailand, as envisaged by its founders.

KEYWORDS: Annual Science and Technology Conference, National Science Week, Outstanding Scientist Award, Teacher development, Public Awareness.

The Science Society of Thailand^{1,2} evolved from the Science Club at the Faculty of Science, Chulalongkorn University, which was the first faculty of science in Thailand. The society was legally registered as the Science Society of Siam on January 27, 1948 (but later "Siam" was changed to "Thailand" in accordance with the new name of the country). Three years later, the society received the honor of the Royal Patronage of His Majesty King Bhumibol Adulyadej.

Presently, the Science Society of Thailand has about 5,000 members, the majority of whom are permanent individual members, while a few are member organizations. The society operates through its 12 branches: namely, Northern Thailand, Northeastern Thailand, Southern Thailand, Biochemistry, Biology, Chemistry, Physics, Mathematics and Computer Education, Science Teachers, Science Communication, Science Clubs for Schools and Science Writers and Publishers Club.

As the first science society in Thailand, it has played a leading role in the development of science and technology in the country under the leadership of its 13 Presidents. This paper summarizes the role of the Science Society of Thailand in the past 6 decades and expresses our deepest gratitude to His Majesty the King in the auspicious year of His Majesty's 80th Birthday Anniversary.

PROMOTION OF RESEARCH IN SCIENCE AND TECHNOLOGY

The Science Society of Thailand organized its first science conference on December 7-11, 1949, including science exhibition. Presently, the Annual Conference has expanded to cover some 2,000 participants and some 900 research paper presentations in some 14 fields. This event has now become an established platform for scientists and technologists of different ages in all fields. Each year, scientific progress and emerging science topics are presented by invited speakers, highlighted by one or two lectures by Nobel Laureates. The meeting has also received good attention and support from national leaders in Thailand.

The Annual Science and Technology of Thailand Conference has stimulated both the quantity and the quality of research in Thailand. It has also provided opportunities for many scientists and scientific organizations to expand the scope of their activities and to cooperate with one another.

In 1997, the Science Society of Thailand with the cooperation of the National Science and Technology Development Agency (NSTDA), the National Research Council of Thailand and the Suksapatana Foundation initiated the founding of Thai Academy of Science and Technology (TAST) as a "Think-Tank" of science and

technology for Thailand, to promote high quality research and development and to coordinate with the national science and technology academies of other countries. Presently, the society works very closely with TAST.

SCIENTIFIC PUBLICATION AND SCIENCE COMMUNICATION

The Science Society of Thailand publishes two journals. One, *ScienceAsia*, now in its 33rd year, is a quarterly English-language research journal of international quality, containing refereed scientific research papers. The other, *Science Journal* (Worasan Wittayasart in Thai) is a bi-monthly Thai-language magazine, now in its 61st year, aimed towards a broader readership, especially members, students and teachers.

Apart from these journals, the Science Society of Thailand has also published basic college science textbooks, manuals and books for science teachers, as well as other publications, either by its central committee or by its Science Writers and Publishers Club.

PROMOTION OF THE TALENTED STUDENTS IN SCIENCE AND MATHEMATICS

Since 1982, the Science Society of Thailand has organized annual nation-wide activities for youths and children, during the National Science Week on the occasion of the National Science Day, the 18th of August. The activities include competitions and contests of various kinds, the highlight of which is the science project/innovation competitions at all levels, from primary education to higher education, including technical/vocational education. The winners in many competitions receive plaques from H.M. the King, and some also have the opportunity to compete at the international level.

Science camps and junior scientist clubs (e.g. junior entomologists, junior ornithologists, etc.) are also major activities of the society in nurturing young talented students through scientific enrichment, leadership and innovation development. Nowadays, the concepts of science camp and science club are well accepted in schools, and this has become a regular school mechanism to nurture young scientists throughout the country.

The Science Society of Thailand was also the first organization to support selected students to compete in the International Science and Mathematics Olympiads. At present, this activity is well taken care of by a public organization called the Institute for the Promotion of Teaching Science and Technology (IPST), and the society still plays a supportive role.

PUBLIC AWARENESS IN SCIENCE

On April 14, 1982, the Thai government approved the proposal of the Science Society of Thailand to honor H.M. King Rama IV as the Father of Science in Thailand and recognizing the 18th of August of every year as the National Science Day. This is an important basis for the promotion of public awareness in science. Each year the government, through the Ministry of Science and Technology, hosted nation-wide events to promote science and technology during the National Science Week and to commemorate King Rama IV, who on August 18, 1868, accurately calculated the occurrence of a full solar eclipse at Wagor District, Prachuabkirikhan Province. Schools and universities join hands to celebrate the occasion by organizing many scientific activities for the public, especially for youths and children.

The Science Society of Thailand has played an important role in promoting awareness of science through the establishment of museums. The first science museum was established in 1953 at Chulalongkorn University.

In 1987, the Science Society of Thailand submitted to the government a proposal to build a national museum, the so-called National Science Park at Wagor, at the actual site where H.M. King Rama IV proved his calculation of the solar eclipse, and the proposal was approved. Now, the site is a big science center for education under the jurisdiction of the Ministry of Education. Even though it has not yet developed to the full scale as proposed by the Science Society of Thailand, we hope to see its full development in the future.

At present, by law, the President of the Science Society of Thailand is a member of the board of the National Science Museum, the biggest public science museum in Thailand under the Ministry of Science and Technology.

PROMOTION OF OUTSTANDING ACHIEVEMENTS IN SCIENCE AND TECHNOLOGY

The idea of rewarding outstanding scientists was initiated in 1981 in the general assembly of the Science Society of Thailand. It was crystallized in 1982 in which the first Outstanding Scientist was honored on the first National Science Day, receiving the plaque of honor from H.M. the King's representative. This award has been considered as the "Nobel Prize" of Thailand, the most prestigious science award in Thailand. This very exciting event led to a discussion on how to focus and sustain this activity. Therefore, the Foundation for the Promotion of Science and Technology under the Patronage of His Majesty the King was established, to take charge of this award, as well as many more awards

later on. Presently, the Foundation has awards for Outstanding Scientists, Young Scientists (age lower than 35), Outstanding Technologists and Young Technologists.

Each year the Science Society of Thailand provides for the awards for senior scientists, outstanding science teachers (through its Science Teachers branch), outstanding science writers (through its Science Writers and Publishers Club) and outstanding science media (also through its Science Writers and Publishers Club).

SCIENCE AND TECHNOLOGY PROFESSION

To promote professionalism in science and technology, in 1993 the Science Society of Thailand proposed a draft of the "Science and Technology Profession Promotion Act" to the Ministry of Science and Technology (at that time the Ministry of Science, Technology and Environment) to promote professionalism, to set professional standards and to assure adequate professional development of scientists and technologists working in Thailand. The law is now in the legislature process.

SCIENCE TEACHER PROFESSIONAL DEVELOPMENT

The Science Society of Thailand works closely with the Council of Deans of Science of Thailand, which consists of the deans from 24 public universities in Thailand, in the professional development of science teachers. We have developed 3 consecutive intensive courses for each of the five basic fields; biology, chemistry, physics, mathematics and earth science for secondary school teachers. In the past 10 years, the society has trained about 10,000 teachers all over the country.

The Science Teachers branch has also enhanced the teaching capacity of lower secondary and primary school teachers.

Our next step is to produce some electronic training materials for teachers to reduce face-to-face training in some topics. This is expected to enhance our capacity to do mass training and to help more teachers than previously.

NATIONAL COLLEGE SCIENCE STANDARDS

In 2004, the Science Society of Thailand initiated the concept of national college science standards by inviting science faculties and senior scientists to discuss the possibility of setting standards for science curricula at the undergraduate level. At present the groups are supported by the Commission for Higher Education and have completed the standards for baccalaureates in Biology, Chemistry, Physics and Mathematics. It is

hoped that this action will promote high quality of bachelor's degree programs in the country.

SCIENCE AND TECHNOLOGY POLICY

The Science Society of Thailand has been involved in science and technology policies in many aspects. The President or members of the Executive Board of the society are usually invited to be involved in policy committees, such as the National Science and Technology Policy Committee, the National UNESCO Committee on Science, the National Science Museum and the National Science Week committees. Many committees and subcommittees are chaired by the President, former Presidents, or Executive Board members of the society.

INTERNATIONAL COOPERATION

The Science Society of Thailand is a member of the Federation of Asian Science Academies and Societies (FASAS) and the Science Council of Asia (SCA). The society organizes many international conferences and meetings regularly either by its central committee or through its branches.

CONCLUSION

The strength of science and technology lies in the strength of science and technology societies and academies within the country. The Science Society of Thailand, as the oldest science society of the country, has assumed major responsibility to promote science and technology over the past 6 decades. Many successes have been achieved, but much more development work lies ahead.

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