

Science journalism training in Asia

Groups are working to improve press coverage of science and technology in Asia and the Pacific

by Adlai J. Amor

The Chinese have a proverb that says that if you give a man a fish, he will have food for only one day. But if you teach the man how to fish, you will feed him for the rest of his life. Old fashioned as it may seem, this maxim may nevertheless prove to be the key to training science journalists and thereby increasing public understanding of science and technology in the developing world.

Science, which has now become part and parcel of daily living, has still to be understood by millions of Asians if their countries are to modernize and develop. But the difficulties of interpreting science and technology for the public are great, particularly in countries with large rural components, as in Asia. Here, illiteracy rates are often high and there are few opportunities for direct contact with modern science and technology. Yet it is precisely in these areas where the need for the application of modern science and technology may be the greatest.

Training programmes in Asia

Despite the uneasy relationship between scientists and journalists, the mass media have always been identified as the best means of bringing about public understanding of science and technology. The media's role in these efforts was reaffirmed in 1984 in Manila, Philippines, during the Conference on Journalism Training in Asia. Some 40 Asian publishers, editors, and professors of journalism called for more specialized training programmes for Asian journalists, especially in science and technology.

Although there were early efforts to promote science journalism in Asia — especially in Japan — they gained momentum only in the last 15 years. The idea behind these efforts is that development can be accelerated by creating greater public awareness of the use of science

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and technology in the development process. And this means encouraging Asian journalists to recognize the news value of local science and technology stories.

Spearheading the move have been the Press Foundation of Asia (PFA) and the International Development Research Centre (IDRC) of Canada. The PFA, based in Manila, is a private, non-stock, non-profit agency owned by the region's publishers and editors. It has been involved in the training of journalists since 1968, and has conducted more than 104 seminars, workshops, and meetings. Of this number, 25 have been devoted to general science and technology, health, environment, energy, agriculture, and demography. In all, more than 2488 journalists have participated in these training activities, an average of 136 journalists per year since 1968.

PFA also runs the only science news service for Asia and the Pacific, *Depthnews Science Service*. It has some 600 newspaper and radio clients and is published or aired in 14 languages. It was started with the help of the IDRC.

The IDRC, based in Ottawa, Canada, is a unique international aid agency devoted to the application of science and technology to solve development problems. It is a public corporation created by the Parliament of Canada in 1970 but is governed by an independent, international board of governors. Arguably, no other agency in the world has done so much as the IDRC in so short a time to promote science journalism in the Third World.

Since 1974, the PFA and the IDRC have been collaborating to promote science and technology in Asia and the Pacific. They have jointly conducted a number of science writing workshops — in 1974, 1977, and 1982 in the Philippines, in 1975 in India, and in Malaysia early this year. (The first such regional course, however, was conducted in 1970 in Tokyo by the PFA and the Nihon Shimbun Kyokai, the Japanese Newspaper Publishers and Editors Association.)

Several other workshops were held in recent years. They include IDRC-assisted workshops in New Delhi in May 1984 with the Press Trust of India, in September 1984 in Kuala Lumpur with the Malaysian news agency BERBAMA, and in 1985 at Los Baños, Philippines with the Philippines News Agency. Similarly, a workshop for

radio producers was conducted in Malaysia in July-August 1984 with the Asia-Pacific Institute for Broadcasting Development.

Although these workshops were not co-sponsored by the PFA, the Foundation assisted them by providing trainers and other consultants. Similar assistance has also been extended by the Foundation to the World Health Organization and the United Nations Environment Programme in conducting health and environment reporting workshops for journalists in Asia and the Pacific.

Training the trainers

While the pool of Asian and Pacific science writers has grown over the years as a result of these training activities, no organized attempt has been made until recently to increase the number of trainers of reporters specializing in science journalism. As a result, the PFA and IDRC heeded the Chinese proverb about teaching a man how to fish as a means of coping with the increasing demand for training in science journalism.

In the long run, however, the Foundation hopes that this new method of training will instill self-reliance among media establishments so that they will train their own people and thus, at the same time, help stretch the region's limited resources.

Three training-the-trainers activities have been supported by the IDRC in the Third World since 1984. The first was held in 1984 in Colombia, the second in Harare, Zimbabwe, in November 1985, and the most recent in Shah Alam, Malaysia, in January 1986.

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The idea behind these workshops was not only to teach science journalism but to design programmes for science journalists and to teach journalists to become science journalism trainers. This idea was later refined in the Malaysian workshop to include the development of training materials in science journalism.

According to Professor Mack Laing of Canada's University of Western Ontario, the Malaysia workshop was the most successful. Professor Laing, who had directed the Zimbabwe workshop, was a member in Malaysia of a four-person training team composed of two journalism professors, a science journalist, and an instructional technology expert.

Eighteen journalists and journalism instructors from nine countries in Asia and the Pacific participated in the Malaysia workshop, which was co-sponsored by the PFA. Though only two or three participants, as profes-

sional journalists, did no teaching in their usual work, there were another eight active journalists whose teaching activities varied from occasional training to regular teaching as in-house training officers.

The nature of the workshop

The workshop to train science journalism trainers had two basic frameworks. The first was the training content, which focused on two areas of competence — science journalism, and training/development in this field. The second was the training process, which involved drawing out needs and required skills and then providing the theory to organize those needs and skills into a training module.

As part of the workshop, the participants were asked to develop 15-minute micro-lessons on any aspect of science journalism. In delivering the lessons, the participants were video-taped and later subjected to group criticism. Training modules were also developed covering the whole range of training for science journalists, editors, and journalism trainers. These modules are currently being edited into a manual called *Science Journalism Training*, the first of its kind in Asia.

As a result of the workshop's success, the PFA's trustees and directors resolved that the Foundation should conduct training-the-trainers workshops annually.

In future workshops, however — whether for training journalism trainers or science journalists — six key areas must be given careful attention: participants, scheduling, training materials, trainers, science-media relations, and evaluation and further training.

Participants. In conducting science journalism workshops, one must realize that most science journalists today are science journalists by accident — though some are by choice. More often than not, science journalists have a background in the field of humanities and hardly any background in the field of sciences. They have become science journalists because they were assigned to cover such “beats” as the health ministry or the environment. Once they move on to other beats — like City Hall or Parliament — few retain interest in science journalism.

It is for this reason that organizers must take a long-term view in training science journalists. If they have been trained and motivated in science journalism early in their careers, when they later become deskmen or editors they will be more open to accept science and technology stories, and thus, more stories on science and technology will appear in the media.

Although most participants in the PFA-IDRC's science journalism workshops had been writing for a minimum of 3 years, it was the first time they had attended a science writing workshop. It was thus crucial for workshop organizers to persuade them from being

accidental science journalists to motivated journalists truly interested in the coverage of science and technology. While their careers were out of the organizers' hands, much was accomplished that would, in the short term, improve and increase science and technology coverage by their respective newspapers or news agencies.

Scheduling. The standard science journalism workshop formula that the PFA has developed over the years involves a balanced combination of lectures, editorial clinics, writing assignments, and field trips.

Mornings are normally reserved for lectures on science and technology. These serve to increase the journalists' knowledge of science and technology. The afternoons are spent on discussing how such knowledge can be communicated to the public.

The editorial clinics are loosely structured practical sessions, which leave a lot of leeway for the trainers to respond to the problems of the journalists. These problems could include simplifying complex scientific processes or dealing with statistics. They could even include putting the problems of the journalists in the context of science and technology in their respective countries.

Writing assignments. Based either on a scientific paper or a field trip, these assignments are an integral part of the editorial clinics. In fact, participants are asked to write for their respective publications while attending the workshop. This not only boosts the coverage of science and technology issues, but also gives the trainers a focal point on which to structure the editorial clinics. It also contributes to an overall newsroom atmosphere that organizers endeavour to cultivate during the workshop.

Field trips. These are especially helpful in giving journalists first-hand experience of conditions in the field or factory or research institute. In addition, scientists feel more free to talk on their home ground than in the workshop room. At least one field trip is scheduled, preferably in the middle of the week. Three field trips may be scheduled for a 2-week workshop.

Two weeks is the longest period practical for a training-the-trainers or general science and technology journalism workshop. A 1-week schedule is ideal for specialized workshops focused on issues like health and the environment. Shorter activities can be held, but only if they are orientation seminars for senior or working science journalists.

Ultimately, the length of the workshops depends on the time editors can spare for their reporters. Since most newspapers in Asia and the Pacific are understaffed, their reporters can be spared for 2 weeks at most.

Training materials. Recently, PFA-IDRC workshops have been using *Science Writing in Asia: The Craft and the Issues* as their basic text. This manual was co-written by Professor Mack Laing, *Depthnews Science* editor Paul Icamina, and myself. It is based on

our collective experience as science journalists and looks at science journalism from an Asian perspective, combined with Western insights. Prior to the appearance of this manual, most training materials were limited essentially to Western sources. The manual is now published in English, Bahasa Indonesia, and Thai. A Nepali edition is currently being prepared.

Research studies and samples of good and bad journalism normally form the core of PFA-IDRC training materials. Research studies are used to show journalists how best to dissect such tomes in order to get to the meat of the matter. The story samples — including the writing assignments of the participants — provide the workshop with case studies through which to impart tips and tricks in the coverage of science and technology stories.

Many of these training materials have been developed over a number of years, and more need to be developed. In most instances, each workshop builds on the training materials of another. But this is definitely one area where more work has to be done. The quality of the instructional materials determines the quality of the learning process; the higher the quality, the better the learning process.

Trainers. Science and technology are often described as "dead" beats. Thus, our experience has shown us that science and technology journalism trainers must be more than teachers. They must also be facilitators and motivators: they should spark excitement in the journalist, excitement that may have faded after several years of covering the beat. Trainers should also bolster the participants' self-esteem as reporters. Only in this way can they recharge the reporters' energies and encourage them to write better.

In all our training programmes, we always stress that we are there as journalists willing to share our experiences with our colleagues. This is necessary for the simple reason that journalists often claim to know more than others. Thus, we are in effect recognizing this claim and inviting them to share their own experiences with other journalists.

This approach is also necessary because no one can ever hope to be an expert in all fields of science and technology. Yes, perhaps an expert in environmental sciences, biotechnology or computers — but not in everything. Thus, the learning process becomes more participatory, with each journalist contributing a bit of what he or she knows towards the creation of a better and holistic understanding of science and technology.

Science and media relations

In a sense, the workshops we have conducted have been encounters between scientists and journalists. Often the discussions are not confined to the science subject at hand, but also deal with many problems faced by scientists and journalists. Although this was never scheduled, it always happened.

When we first found this occurring, we were at a loss to know how to deal with it. But gradually, we learned that the workshops themselves can contribute to a greater understanding by scientists of the media and by the journalists of the scientific process.

We have now realized the value of such encounters and have incorporated them into our editorial clinics. As part of the workshops, the journalists are required to write science and technology stories. Instead of just leaving the trainers to criticize the stories, we normally ask the scientists and technologists to comment on them. This often results in better and clearer stories.

Such interactions have also resulted in better interpersonal relations between the journalists and the scientists and technologists. Trust is established, and contacts are often made for future stories.

Evaluation and further training

The need for further training is especially important for science journalists. The need was raised as early as 1970 when Alton Blakeslee, science editor of the Associated Press, said during the PFA-NSK Science Writers Workshop: "Your training never ends. Besides taking courses, you must read constantly".

Future workshops for science journalists need not be confined to science writing as such: they could be designed more as orientation seminars geared to keeping journalists in touch with the latest developments in science and technology.

In the Philippines, the Science and Technology Journalists Association conducts weekly fora with scientists. Over lunch, the latest scientific developments are discussed. All the discussions are on the record, thus giving

the journalists both a learning experience and a story for submission to their editors.

While there is a need for further training, every effort must be exerted to evaluate such training programmes so that they will meet the requirements of the participants. Evaluation questionnaires have been designed by the PFA for all its workshops and each workshop is subjected to intensive scrutiny during and after the activity. Through such evaluation programmes, each training activity builds on the previous one, and knowledge and experience eventually accumulate.

The future

There is one area in long-term training that needs to be further explored: degree courses in science journalism. Although some Asian universities offer one or two classes in science journalism, there is no university in the region that offers a speciality in this subject.

In the long term, science journalism courses in universities — whether for journalists or scientists — will contribute greatly to increasing public understanding of science and technology. Asian educational institutions already offer science and technology courses; all that is needed now is to teach their students to communicate their relevance to the daily life of the Asian people.

Some universities in the Association of Southeast Asian Nations (ASEAN) region are now thinking of offering science journalism. But as with the short-term workshops, they are hampered by the lack of qualified teacher-trainers. The demand for more training-of-trainers workshops is most certain to increase in the next few years. As the Chinese proverb says, it will only be through teaching universities, press institutes, and the media "how to fish" that we can cope with the demand.

