

A REPORT ON TISTR/CSIR TRAINING COURSE IN
TECHNIQUES OF SCIENTIFIC REPORT WRITING AND SCIENCE COMMUNICATION

ORGANIZED BY

THAI NATIONAL DOCUMENTATION CENTRE
THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH

JUNE 26 - 30, 1989

BANGKOK, THAILAND

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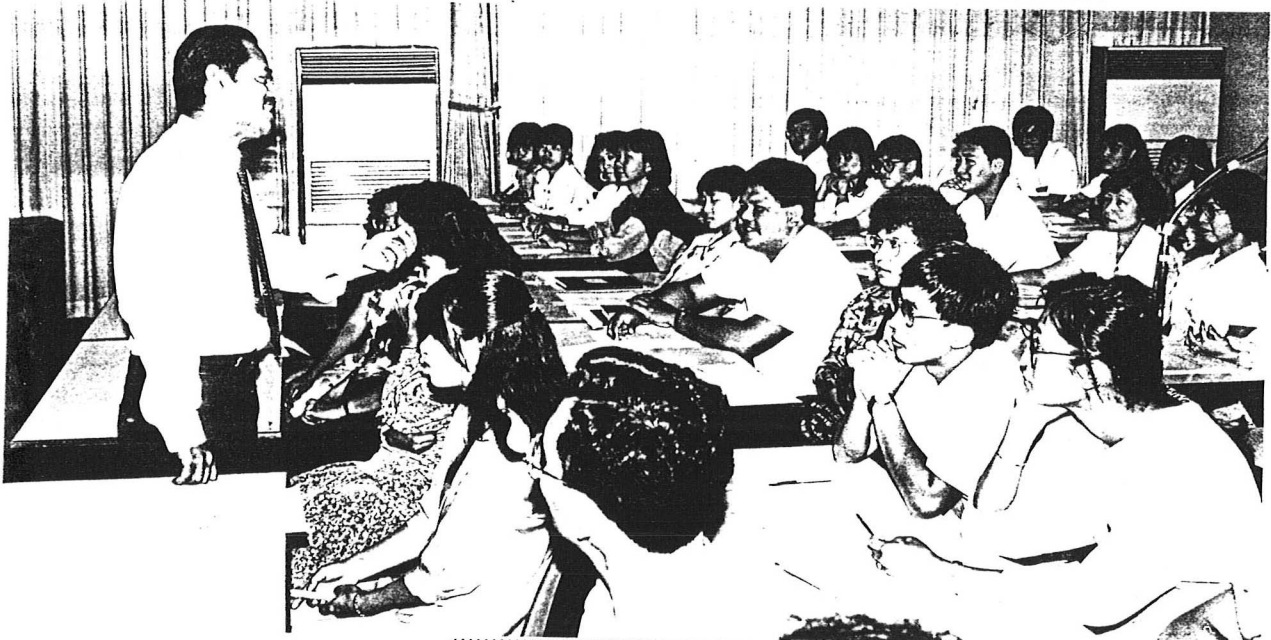
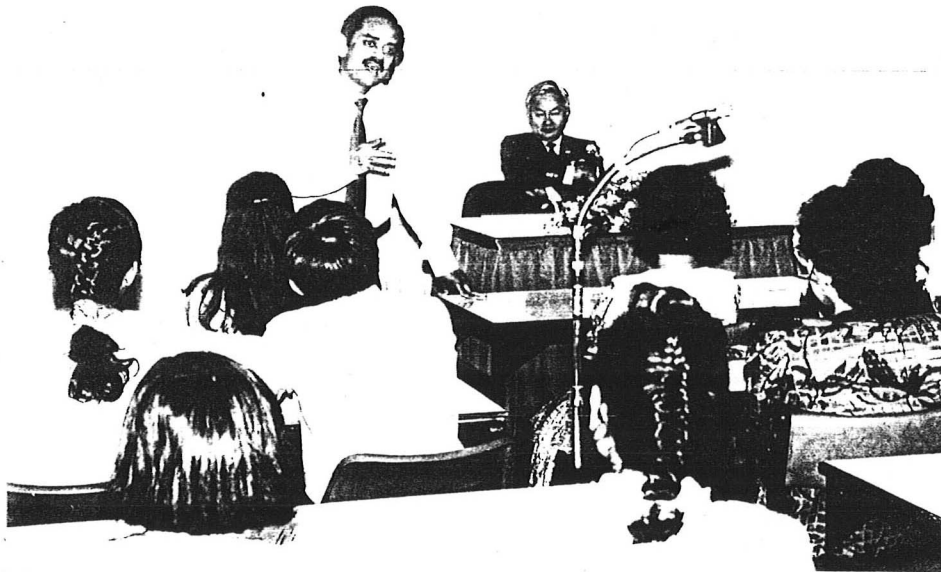
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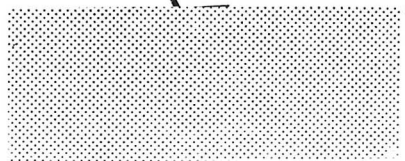
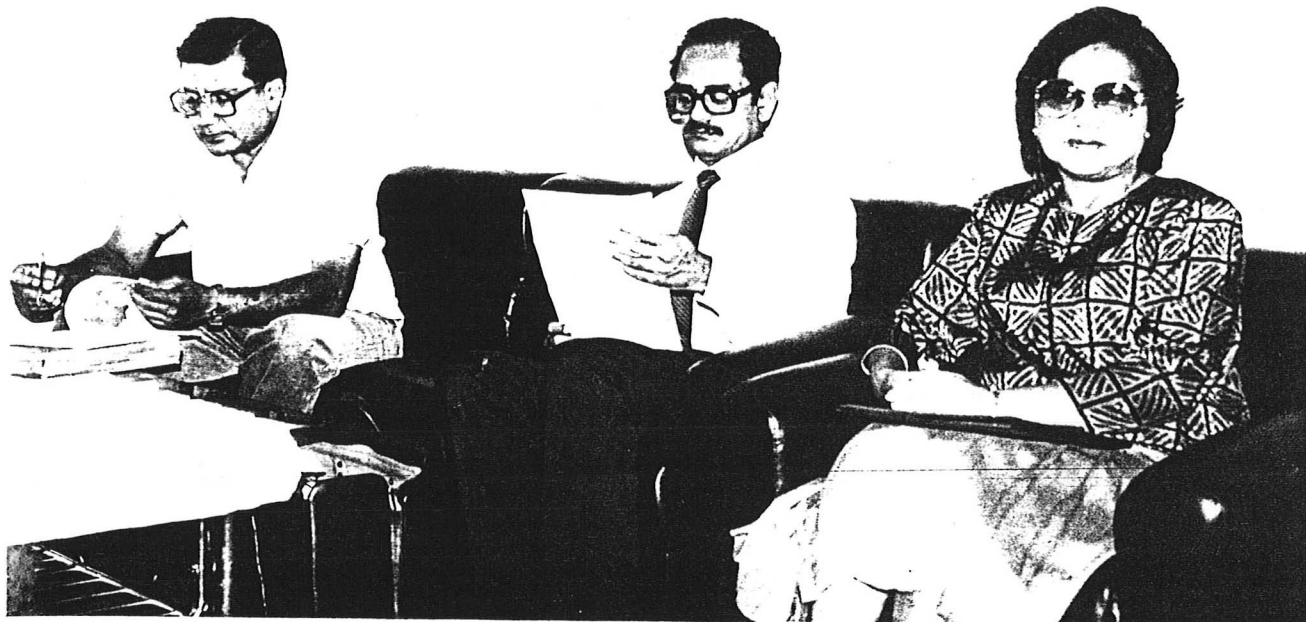
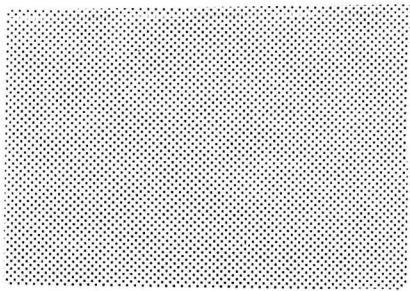
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A REPORT ON TISTR/CSIR TRAINING COURSE IN
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Organized by

Thai National Documentation Centre

Thailand Institute of Scientific and Technological Research

June 26-30, 1989

Bangkok, Thailand

I. BACKGROUND INFORMATION

With reference to an agreement on scientific and technological cooperation, during the year of 1988-1990, between the Thailand Institute of Scientific and Technological Research (TISTR) and the Council of Scientific and Industrial Research (CSIR) of India, a training course in Techniques of Scientific Report Writing and Science Communication was proposed by CSIR to be held at TISTR, during June 26-30, 1989. Such training course was considered to be beneficial to the work programmes concerning information services under the responsibility of the Thai National Documentation Centre (TNDC) as well as personnel development programme of TISTR.

There were totally 49 researchers and technical officers of TISTR who had shown interest to participate in the training course of which the resource persons-- Mr. N.R. Rajagopal and Mr. A.K. Sen--were supported by CSIR and the Publication and Information Directorate (PID).

II. OBJECTIVES

1. To achieve beneficial cooperation between TISTR and CSIR by focussing on scientific and technological information.

2. To exchange knowledge and experiences in scientific report writing and science communication.
3. To enhance knowledge and experiences of TISTR's researchers in science writing and science communication.

III. OPENING SESSION

The training course was held in June 26-30, 1989 at the Seminar Room of the Thailand Institute of Scientific and Technological Research. There were 43 participants and 6 observers, both researchers and technologists, from 19 research divisions and specialized centres of TISTR with names and addresses as appeared in Annex 1.

The opening session began with the report delivered by Mrs. Nongphanga Chitrakorn, Director of TNDC, (Annex 2) who summarized the background information of the training course as it derived from an agreement on scientific and technological cooperation between TISTR and CSIR of India. She specified that such cooperation included an exchange of knowledge and cooperation on scientific and technological information which is the responsibility of TNDC. She extended special thanks to CSIR for providing the services of its experts Mr. N.R. Rajagopal and Mr. A.K. Sen from CSIR and the Publication and Information Directorate (PID). She mentioned the success of PID with its publication of scientific and technological documents as well as its experienced personnel which had been recognized by Unesco to help render contribution to the other Asian countries. As there were a number of TISTR's researchers interested to participate in the training course, she hoped that all of them would gain techniques in scientific report writing and science communication which are very useful to their present and future works.

The Deputy Governor of the Thailand Institute of Scientific and Technological Research, Dr. Santhad Rojanasoonthon, inaugurated the training course, then mentioned the agreement signed between TISTR and CSIR in 1986 for conducting joint researches in 10 major projects, which are being in progress. Cooperative agreement apparently accomplished has been the transfer of membrane technology for reverse osmosis desalination system to TISTR through the Government of both countries. He expressed his gratitude to CSIR for sending 2 experts to conduct a training course in science writing and science communication which was a part of those cooperative agreements. He hoped that the knowledge and experiences gained from this training course would provide certain benefits to the staff members from various units of TISTR (Annex 3).

IV. SUMMARY OF TECHNICAL SESSION

The training course was organized into various sessions (Annex 4) beginning with "General Principles of Science Communication". Other sessions included "Journal Editing", "Science Communication", "Scientific Report Writing", "Popularization of Science" and "Requirement of Editor". Resource persons' biographies are given in Annex 5.

Summaries of these sessions are as follows:

Science Communication and Popularization of Science

Mr. N.R.Rajagopal described the organization chart and work activities of CSIR, then explained general principles of science communication. He narrated that science could be communicated in many forms of output, for instance, papers, seminars, journals, reports,

articles in newspapers, interviews, photographs, films, T.V. or video programmes, etc. He mentioned that there were 2 channels for science communication : printed media and electronic media. Concerning science communication output, Mr. N.R. Rajagopal emphasized how to present science in forms of reports and mass media. He also suggested necessary items which should contain in plan documents, annual reports, trend reports, scientific reports, technical feasibility reports and monographs.

In connection with popularization of science, he stressed the importance of science and technology as an instrument for country development; therefore, popularization of science-- distribution of scientific knowledge and information to people throughout the country-- played a necessary role, especially in India where different languages and understandings caused a hard problem. He recommended that the government should take an important part in promoting mass media for popularization of science in various methods of presentation such as formal techniques : printed media and electronic media, and informal techniques : exhibitions, S&T museums, science centres and parks, contests, popular lectures, planetaries and folk-media. He emphasized that one important factor for popularization of science is the people who could interpret science for the benefit of countrymen in the languages they could understand. He also suggested T.V. as a suitable medium exposing scientific programmes because of its advantage of both oral and visual information dissemination.

Scientific Report Writing and Requirement of Editor

Mr. A.K. Sen described the necessary parts of English writing, body of writing and questions which author should have in mind before writing. He suggested words and language used in scientific report writing should be concise and clear. Good

scientific articles should provide some intellectual thought to readers and provoke for second thought. He mentioned three kinds of journal : primary journal, secondary journal, and tertiary journal, which were important in scientific writing. He explained elements of research paper, proper use of English words and common mistake in writing. Mr. A.K. Sen also assigned the participants to write a letter to an editor of scientific journal to submit a manuscript for publication. He then made some comments and gave a clue what information an editor required and expected from a letter of submission.

V. TRAINING COURSE EVALUATION

~~-----~~ Evaluation was given in general by the resource persons in which 6 topics were provided to participants to make 3-5 minute speech on the selected topic in front of the training room (Annex 6). There were approximately 30 persons participated in this evaluation.

Another evaluation of the training course was made by participants through the hand out questionnaires (Annex 7) and the returned replies which indicated the following results:

- More than 90 percent of the participants agreed that the training course conformed to the objectives.
- Percentages of most and moderate satisfaction to the contents of the training course were 26.67 and 73.33 respectively.
- More than 90 percent felt that experience gained from the training would be useful to their future work.
- More than 60 percent mentioned that the duration of training was suitable.

They also requested TNDC to continue organizing another similar training course. If possible, there should be a conclusion in Thai after each session to gain clearly complete understanding. Most of them required more supplementary documents from the resource persons.

VI. CLOSING SESSION

The training course was concluded on Friday June 30, 1989. Certificate of Attendance (Annex 8) was given to each participant by the Executive Adviser of TISTR, Miss Poonsook Atthasampunna who declared the training close and expressed special thanks to CSIR and PID for providing the valuable services of the two resource persons. She also extended her appreciation to both the participants and the organizing committee for their contribution to the success of this training course.

TISTR/CSIR Training on
Techniques of Scientific Report Writing
and Science Communication
Bangkok, Thailand, 26-30 June 1989

List of Participants

Food Industry Department

1. Mr. Wiwat Pathomyothin M.S. (Food Technology)
2. Miss Auchareeya Jarayapun M.S. (Agricultural Science)
3. Mr. Sahp Viteethum M.S. (Chemistry)

Pharmaceuticals and Natural Products Department

4. Mrs. Siripen Jarikasem M.S. (Pharmacy)
5. Miss Acharaporn Punruckvong M.S. (Organic Chemistry)

Chemical Industry Department

6. Miss Kanita Runghirunruk M.S. (Chemical Analysis)
7. Mr. Boonchu Leelakajornjit B. Eng. (Mechanics)
8. Miss Rungthip Chaiwattananone B.S. (General Science)
9. Mr. Boonchai Trakulmahachai B.S. (Chemistry)
10. Miss Thitima Chanchitsin B.S. (Chemistry)
11. Mr. Manus Earthayapan B. Eng. (Mechanics)
12. Miss Jittima Laohapojanart B.S. (Chemistry)

Biotechnology Department

13. Mr. Suntud Sirianunpiboon M.S. (Industrial Microbiology)
14. Mr. Prasert Amarit M.S. (Agriculture)

Building Technology Department

15. Mrs. Suvanna Vibhatakarasa M.B.A. (Economics)
16. Mrs. Pornthip Thamaratanaporn M.Arch. (Architecture)
17. Mr. Tussilp Kumkew B.Eng. (Civil Engineering)

Metal and Material Technology Department

18. Dr. Nongluck Pankurdee Ph.D. (Material Science)
19. Mrs. Anunya Tribumrungsuk M.S. (Chemical Techniques)
20. Miss Sutipa Masuthon B.S. (Chemistry)
21. Mr. Wirach Chantra B.S. (Material Science)

Agrotechnology Department

22. Mr. Songkiat Visuttipitakul M.Ag.Sci. (Soil Science)
23. Mr. Soonthorn Duriyaprapan M.S. (Agricultural Science)

Energy Technology Department

24. Mr. Chirasak Boonrowd M.Eng. (Industrial Management)

Environmental and Resources Management Department

25. Mr. Somchai Dararatana M.S. (Environmental Science)

Ecological Research Department

26. Mr. Nivesh Nadee B.Ed. (Biology)

Thai Packaging Centre

27. Mrs. Mayuree Paklamjeak M.Sci. (Food Technology)
28. Mr. Peerawat Somnuk B.Ind. (Production Technology)

Automotive R&D Centre

29. Mr. Anek Panturaks B.Eng. (Mechanics)

Special Programme Centre

30. Miss Kruawan Potisombat B.S. (General Science)

Testing and Standards Centre

31. Mr. Vicha Tunvirachaisakul M.A. (Science & Technology
Modernization)
32. Mrs. Chaveewan Phunchaisri M.S. (Biochemistry)
33. Miss Jittra Chaivimol B.S. (Chemistry)

Thai National Documentation Centre

34. Mrs. Somsong Leksakul M.S. (Horticulture)
35. Mrs. Saisurang Chotipanich B.S. (Statistics)
36. Miss Narumol Ruenwai B.A. (English Language)
37. Mrs. Payao Rodpothong B.A. (Hons., English, Librarian
Science)

Engineering Consultancy Service Centre

38. Miss Vipada Sirichai M.B.A. (Computer Science)

Industrial Co-operation and Promotion Centre

39. Miss Janejit Phanawadee B.S. (Chemical Engineering)
40. Mr. Boonsit Ampaipanasan B.Acc. (Marketing)

Office of Policy and Planning

41. Miss Yuwadee Poolsiri M.S. (Food Science)
42. Mr. Chaiwat Puangtanasarn M.S. (Economic Development)
43. Mr. Kosol Musikawatr B.Econ. (General Economics)

Observers

Thai National Documentation Centre

- | | | |
|-----|--------------------------|-----------------------------|
| 44. | Mrs.Valyalada Hongthong | B.A. (Liberal Arts), U.S.A. |
| 45. | Mrs.Kanchana Thiemsawate | B.S. (General Science) |
| 46. | Mrs.Bang-on Theimsiri | M.A. (Library Science) |

Chemical Industry Department

- | | | |
|-----|------------------------|-------------------------------|
| 47. | Dr.Kesara Nutalaya | Ph.D. (Chemical Engineering) |
| 48. | Mr.Silpachai Arunyanak | M.S. (Industrial Engineering) |

Office of the Governor

- | | | |
|-----|----------------------|--------------------------|
| 49. | Mr.Peerapat Yaowasut | B.A. (Political Science) |
|-----|----------------------|--------------------------|

Report

to

Dr. Santhad Rojanasoonthon

Deputy Governor, Thailand Institute of Scientific
and Technological Research

by

Mrs. Nongphanga Chitrakorn

Director, Thai National Documentation Centre

The Deputy Governor of Thailand Institute of Scientific and
Technological Research:

On behalf of the Thai National Documentation Centre (TNDC), the organizing committee and all participants, I feel deeply honored and thankful to Dr. Santhad Rojanasoonthon, the Deputy Governor of TISTR, for coming to preside over the opening ceremony of a training course in "Techniques of Report Writing and Science Communication" today.

This training course is a result of an agreement on scientific and technological cooperation between the Thailand Institute of Scientific and Technological Research (TISTR) and the Council of Scientific and Industrial Research (CSIR) of India. Such cooperation includes an exchange of knowledge and experiences on scientific and technological information which is the responsibility of TNDC. From various CSIR's proposals, TNDC has figured that the most beneficial cooperation to TISTR at the early stage should be the techniques of producing publication and other forms of media especially the standardized research report writing.

Since CSIR had truly recognized the importance of science editing and science publishing together with the audio-visual aids to disseminate scientific and technological works, it established the Publication and Information Directorate (PID) which has become the first institute of India that publishes the scientific and technological documents in various fields for more than four decades. Many of the journals being published are well known throughout the world, such as the Indian Journal of Chemistry, Indian Journal of Applied Physics, Journal of Scientific and Industrial Research, to include Medicinal and Aromatic Plants Abstracts which received certain data from TNDC.

The success of PID has been originated from experienced personnels who are being recognized by UNESCO to occasionally give training courses in all aspects of science editing and science publishing to many countries in Asian region. Therefore, it is hopeful that the 49 TISTR's personnel who are responsible for presenting the many forms of research works and attending this course would gain the useful techniques of producing and writing reports from both CSIR's experts --Mr. Rajagopal and Mr. Sen-- in order to develop knowledge and experiences.

For the honor of all the participating trainees, it is now appropriate for me to invite Dr. Santhad, the Deputy Governor of TISTR to open the training course on Techniques of Scientific Report Writing and Science Communication.

Opening Address

by

Dr. Santhad Rojanasoonthon

Deputy Governor, Thailand Institute of Scientific

and Technological Research

at

Training on "Techniques of Scientific Report Writing and
Science Communication"

Thailand Institute of Scientific and Technological Research

26 June 1989

Distinguished Experts and Participants:

It is a privilege and great pleasure for me to receive an invitation to preside over the opening ceremony of the training on "Techniques of Scientific Report Writing and Science Communication" here today.

In pursuance to an agreement for Scientific and Technological Cooperation between the Thailand Institute of Scientific and Technological Research (TISTR) and the Council of Scientific and Industrial Research (CSIR), the cooperation will cover an exchanging of senior scientists and information specialists in carrying out joint research projects and in arranging seminar and training courses on subject of mutual interest.

Since TISTR and CSIR had signed an agreement in 1986, both have agreed to conduct joint researches in 10 main projects, out of which 3 are in processing stage such as the projects on Desalination

of Brackish Water and Membrane Technology, Medicinal Plants and Natural Products and Transferring of Food Technology.

What I would be most happy to mention here is the success at national level of a cooperation agreement between TISTR and CSIR, by which the government of India had given Thailand a desalination of brackish water equipment with a transfer of technology on cell membrane. Such cooperation could partly help solve the problem of a lack of drinking water in the northeastern part of the country, and the Prime Minister had recently presided over the receiving ceremony of such equipment.

This training has also been organized according to an agreement between TISTR and CSIR in exchanging knowledge and experiences in science editing and science publishing which CSIR has a very long and extensive experience.

I would like to take this opportunity to thank CSIR for their generous contribution by sending these two highly qualified experts to conduct a training course in scientific report writing and science communication, which is the topic that TISTR's officials have great interest due to their normal working duties, as clearly illustrated by a great number of TISTR's officials applying for this training.

I am certain that all the participants will have to work hard in order to gain certain knowledge and experiences which will be beneficial to your own working units and it is also the aim of TISTR and CSIR as well.

Now at this auspicious moment, I declare open the training course and wish it every success and accomplishment of its objectives.

TISTR/CSIR
Techniques of Scientific Report Writing
and Science Communication
June 26-30, 1989
Thailand Institute of Scientific and Technological Research

Agenda

June 26

8.30-9.00 Registration

9.00-10.00 Report to the Deputy

Mrs. Nongphanga Chitrakorn

Governor of TISTR

Director of INDC

Opening Address

Dr. Santhad Rojanasoonthon

Deputy Governor of TISTR

10.00-10.20 Coffee break

10.20-12.00 General principles
of science communication
- Science communication
outputs

Mr. N.R. Rajagopal

12.00-13.30 Lunch

13.30-15.00 Journal editing
- Techniques of report
writing

Mr. A.K. Sen

15.00-15.20 Coffee break

15.20-16.30 Continuation of
previous session

June 27

8.30-10.00 Science communication Mr. N.R. Rajagopal
- Plan documents
- Annual reports

10.00-10.20 Coffee break

10.20-12.00 Continuation of
previous session

12.00-13.30 Lunch

13.30-15.00 Scientific report writing Mr. A.K. Sen
- Parts of research paper

15.00-15.20 Coffee break

15.20-16.30 Continuation of previous
session

June 28

8.30-10.00 Science communication Mr. N.R. Rajagopal
- Trend reports
- Technical feasibility
reports

10.00-10.20 Coffee break

10.20-12.00 Science communication Mr. N.R. Rajagopal
- Monographs
Popularization of Science

12.00-13.30 Lunch

13.30-16.30 Free afternoon

June 29

8. 0-10.00 Requirement of editor Mr. A.K. Sen
- A letter to editor

10.00-10.20 Coffee break

10.20-12.00 Continuation of previous
session

12.00-13.30 Lunch

13.30-14.00 Science communication Mr. N.R. Rajagopal
- Mass media including
T.V., films, radio, etc.

14.00-14.20 Coffee break

14.20-16.30 Continuation of previous
session

June 30

8.30-10.00 General evaluation Mr. N.R. Rajagopal
Mr. A.K. Sen

10.00-10.20 Coffee break

10.20-12.00 Presentation of
Certificate of Attendance
Closing Address

Miss Poonsook Atthasampunna
Executive Adviser of TISTR

Resource Persons' Biographies

1. Mr. N.R. Rajagopal

Council of Scientific and Industrial Research, India

- Born 12 December 1936.
- Married, two children.
- B.Sc. (Chemistry), M.A. (Econ. & Statistics), M.Phil. from Birla Institute of Technology and Science, Pilani (working for Ph.D. in S&T Development, Birla Institute of Technology and Science, Pilani).
- Has been with the Council of Scientific & Industrial Research for over 34 years (about 30 years in Headquarter).
- Experience in planning for over 20 years.
- Editor of CSIR Annual Report (since 1977) and a number of special reports, required to project the organization's image.
- A science communicator--radio, T.V., Press.
- At present, Senior Deputy Adviser in CSIR Planning Division and in addition staff officer to the Director General, CSIR.
- Responsible for all important communications from Director General of CSIR to the PM, etc.
- Founder Secretary of the CSIR Sports Promotion Board.
- Theatre Critic to a leading national daily in India.
- Hobbies: theatre, sports, music.

2. Mr. A.K. Sen

Publication & Information Directorate, India

- Presently Editor of the Indian Journal of Experimental Biology, one of the prestigious he highly acclaimed journal of the country in the field of Life Sciences.
- Devoted in this editorial job for the last 25 years.

- He joined this work with the initial background of Masters of Science Degree with specialization in Genetics.
- He is associated with various editorial policies of different journals in CSIR and outside.
- He has provided expertise to several associations to start new journals.
- He is always interested to maintain high standard of his journals. (work)
- It is his first visit to Bangkok.
- Popular science writing is his hobby.

EVALUATION

Each participant selects ONE topic from the following, comes up, introduces himself/herself (name, specialization, area of work) and speaks for 3-5 minutes in

- Thai

or - Thai mixed with English

or - English

as per his/her choice:

1. My views on Science Communication in general and the different forms of the output.
2. Different techniques of writing and presentation of reports.
3. Popularization of Science.
4. What is the most important part of a research paper, explain.
5. In your opinion who (author, referee, editor) plays the most significant role in publication of a research paper?
6. How should one feel and react if his/her paper is not accepted for publication in a journal?
 - Everyone speaks
 - Please do not disappoint US

Rajagopal

Sen

IISTR/CSIR
Training on Techniques of Scientific Report
Writing and Science Communication
26-30 June 1989

EVALUATION FORM

COMMENTS ON COURSE CONTENTS

1. To what extent does the training conform to the objectives?

Less Medium Most

2. To what extent will you benefit from the training?

Less Medium Most

3. Is the time set for training course suitable?

Suitable Unsuitable

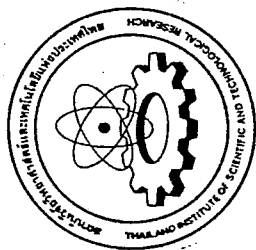
Recommendations _____

4. To what extent the contents of the training will contribute to your work?

Less Medium Most

5. Summary of advantages derived _____

6. Recommendations _____



TISTR/CSIR Training on
Techniques of Scientific Report Writing
and Science Communication
Bangkok, 26-30 June 1989

This is to certify that

MRS. VALYALADA HONGSTONG

attended the Training held from 26 to 30 June
1989 at the Thai National Documentation Centre,
Thailand Institute of Scientific and Technological
Research, Bangkok.

(Prof. Dr. Smith Kampeemool)
Governor of TISTR

ORGANIZING COMMITTEE

Mrs. Nongphanga Chitrakorn Director, Thai National Documentation Centre	Chairperson
Mrs. Duangduen Inthorn Director, Training Division	Member
Mrs. Valyalada Hongthong Director, Scientific Editorial Service Division	Member
Miss Salaisophin Komarakul Na Nakorn Director, Foreign Relations Division	Member
Mr. Ampon Swangpant Chief, Printing Service Section	Member
Miss Poolsuk Fonghem	Member
Mrs. Rachanee Voottipreux	Member
Miss Mayuree Sriprachote	Member
Mr. Durongrit Sudsanguan	Member
Miss Vanvipa Srisuchat	Member
Miss Pensri Ponthat	Member
Miss Sukitta Kulkijs	Member
Miss Nisachon Sangsawang	Member
Miss Narumol Ruenwai	Member and Secretary

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