

Activities of Subcommittee on Chemistry Education for Development of Committee on Chemistry Education (CCE)

Prepared by Mei-Hung Chiu, August 6-7, 2007

CED Group members

Prof. Mei-Hung Chiu (Chair, Taiwan)	Prof. Ram Lamba (Puerto Rico)
Prof. Warren Beasley (Australia)	Prof. Mordechai Livneh (Israel)
Prof. John Bradley (South Africa)	Dr. Lida Schoen (The Netherland)
Prof. Bob Bucat (Australia)	Prof. Erica Steenberg (South Africa)
Prof. Masahiro Kamata (Japan)	Prof. Natalia Tarasova (Russia)
Dr. Jing-Wen Lin (Taiwan)	

Contents

- ◆ CED Group members
- ◆ Activities in 2006, 2007, and 2008
- ◆ Proposed actions

The activities:

- (1) To hold two group meetings for discussing the potential work for the group during the 19th ICCE, Seoul, August 2006.
- (2) To work with Dr. Fortunato B. Sevilla III on the proposal for Flying Chemists Program in Philippines in 2008. The proposal has been approved by the committee (See <http://www.iupac.org/projects/2007/2007-018-1-050.html>).
- (3) To provide a standard procedure of applying FCP (See Appendix A).
- (4) To create a list of resource persons for FCP (See Appendix B)
- (5) To work with Lida Schoen and Erica Steenberg on a new YAC evaluation proposal for certain countries (such as South Africa, Russia, Taiwan and Kenia/Mauritius) (to be further discussed in more details in Torino).
- (6) To hold the 2nd NICE in Taipei on July 30-31, 2007 (Program chair: M. H. Chiu, co-chairs: Choon Do, Masato Ito, Masahiro Kamato, see Descriptions in Appendix C). The Charter for the NICE is attached as Appendix D.
- (7) To contact Julia Hasler at UNESCO for a possible involvement in reworking the Source book (with Dr. Mordechai Livneh, to be discussed)

Issues to be discussed:

1. The document of applying Flying Chemist Program Procedures (See appendix A) and the document of an invitation letter for resource persons (See appendix B).

Result: OK.

2. Scholarship for international students to attend ICCE (\$2,500---for five international students)
 - (1) Procedures
 - (2) QualificationResult: Need more discussions.

3. organize a CCE-sponsored seminar for the ICCE
 - (1) To invite international associations to attend the ICCE biannual meeting
 - (2) The theme could be suggested from the CED.Result: The chair could invite the task force chairpersons of the FCP to form a symposium presented at the 20th ICCE in Mauritius.

4. Continuous effort on promoting FCP and modifying resource book from UNESCO

Appendix A
Application Procedures for Flying Chemist Program
Prepared by Mei-Hung Chiu
General Assembly, Turino, Italy, 2007

The Flying Chemists Program was initiated in January 2005. It aims to provide emerging countries strategies to improve teaching and learning of chemistry at primary, secondary, and tertiary levels. This program intends to bring experts in chemistry and chemical education to countries, in particular, economically disadvantaged, that are interested in introducing new intervention of teaching and learning strategies or improving their chemistry education. The FCP will support resource persons' economic air fare and the host country will provide the cost for their stay and for the conference/workshop/seminar. The following procedures are recommended to those who are interested in applying FCP.

Procedures:

1. To download descriptions of FCP from
<http://www.iupac.org/standing/cce/FCP.html>
2. To contact the CCE and CED (sub-committee of CCE)
3. To identify the aims for the FCP
4. To search for potential resources persons
5. To find the local support or external funding agency
6. To interact with the chair of CED for preparation of the proposal (guidelines for completion of project submission form at
http://www.iupac.org/projects/form_guide.html)
7. To submit the proposal (Project submission form
http://www.iupac.org/projects/project_form.doc) to the CCE
8. To submit the proposal for holding small conference (see www.iupac.org)
9. To receive review comments from the Project Group and make revisions for re-submission, if necessary.
10. Once the proposal is accepted, close contact with CCE and CED to prepare the FCP event.
11. To write up the report for the committee after completing the project and a concise report for *Chemistry International*.
12. To be encouraged to conduct a follow-up project to investigate the impact of FCP

Appendix B

An invitation for serving as a resource person for Flying Chemists Program
--- Project sponsored by Committee on Chemistry Education (CCE) of IUPAC

The Flying Chemists Program was initiated in January 2005. Two group research experts went to India in 2005 and Sri Lanka in 2006. Currently, we have a newly accepted FCP project from Philippines that will hold a conference on “Towards an improved teaching and learning of chemistry at the tertiary level in the Philippines”. This FCP program aims to provide emerging countries strategies to improve teaching and learning of chemistry at primary, secondary, and tertiary levels. This program intends to bring experts in chemistry and chemical education to countries, in particular, economically disadvantaged, that are interested in introducing new intervention of teaching and learning strategies or improving their chemistry education. The FCP will support resource persons’ economic air fare and the host country will provide the cost for their stay and for the conference/workshop/seminar.

This letter is to invite experts in chemistry to provide their availability to support FCP program in future. If you are interested in serving as a resource person, please fill out the form below (feel free to recommend potential resource persons), one paragraph (3~4 lines) of your curriculum vita and return it to the chair of CED, Prof. Mei-Hung Chiu at mhchiu@ntnu.edu.tw or CCE secretary Prof. Eva Åkesson at eva.akesson@rektor.lu.se.

Information about the projects under the FCP program :

1. 2005 visit to India <<http://www.iupac.org/projects/2005/2005-004-1-050.html>>
2. 2006 Sri Lanka <<http://www.iupac.org/projects/2005/2005-030-1-050.html>>
3. 2008 Philippines <<http://www.iupac.org/projects/2007/2007-018-1-050.html>>.

Name	Title	Affiliations/ Institute	Expertise in Research	Language spoken

Appendix C

General information about NICE symposium (copied from the Proceeding of NICE)

Introduction

The original idea of the Network for Inter-Asian Chemistry Educators (NICE) was initiated by Professor Choon H. Do from Korea, Masato M. Ito from Japan, and myself from Taiwan during the International Conference on Chemical Education (ICCE) in Istanbul, Turkey, in 2004. The purpose of the NICE symposium is to bring chemistry educators together to share research and practical experiences in the area of chemistry. In particular, students from Asian countries face high exam pressures for entering high schools and universities. Questions that we considered as very important issues in chemistry education are — how teachers develop their pedagogical content knowledge for teaching chemistry; how they inspire students' creative and critical thinking in learning chemistry; how they stimulate students' interest by providing hands-on activities; and how they develop students' inquiry skills. We, therefore, decided to hold a symposium every other year (to avoid this overlapping with the ICCE) in Korea and Taiwan.. In 2006, we had the first one in Seoul in conjunction with the ICCE organized by Professor Do, where 18 papers were presented, six from each organizer country/region. We (three initiators plus Professor Masahiro Kamata, Professor Chin-Cheng Chou, and Dr. Jing-Wen Lin) had a tentative idea in Seoul and then we followed it up to prepare the 2nd NICE symposium in Taiwan. This year's symposium is going to have four plenary lectures, 27 oral presentations, 16 posters, and two demonstrations. Participants include 16 from Japan, 16 from Korea, one from Hong Kong, two from China, and many from Taiwan. A wide range of topics in this

symposium are from technology, curriculum, conceptual learning, problem solving, scientific attitude, web-based learning, modeling activities, public understanding of chemistry, and small-scale experiments. In particular, we have organized two special exhibitions: National Museum of Natural Science and National Institute for Compilation and Translation (for chemistry curriculum and textbooks).

Finally, I would like to acknowledge the National Science Council for providing us financial support and Taiwan New Japan Chemical Corporation for donating souvenirs for the participants. Also, I would like to express my sincere thanks to the three co-chairs, advisory committee, reviewers for the proposals, and working task members for the symposium. In addition, special appreciation goes to Dr. Jing-Wen Lin and Miss Hsiu-Yi Chao for their great help during the past few months. Thank you all for your contributions to the symposium and hope you enjoy the program. I look forward to your continuing support and participation in the NICE.

Symposium Chair,

Mei-Hung Chiu

July 24, 2007