

Session C10

Statistics in Her Education

Organisers: Sharleen Forbes (Wellington, New Zealand)
Helen Wily (Christchurch, New Zealand)

Invited Speakers: Megan Clark (Wellington, New Zealand)
Sharleen Forbes (Wellington, New Zealand) and
Elizabeth Robinson (Auckland, New Zealand)
Saleha Naghmi Habibullah (Lahore, Pakistan)
Gila Hanna (Toronto, Canada)
Birgitta Hedman (New York, USA)
Ruth Hubbard (Brisbane, Australia)
Berinderjeet Kaur (Singapore)
Mary Rouncefield (Chester, England)
Elisabeth Wells (Christchurch, New Zealand)

Abstracts: Joanna Higgins (Wellington, New Zealand)
Juanita Manalo (Manila, The Philippines)
Linda Nicholls (Auckland, New Zealand)
Pamela Shaw (Sydney, Australia)

Introduction

The acronym SHE (Statistics in Her Education) was incorporated into the title of three of the four sub-sessions in this group:

SHE studies statistics
SHE teaches statistics
SHE uses statistics

and was used on buttons given to each speaker so they could be easily identified. The fourth sub-session was entitled

New Zealand Women in Statistics.

The organisers' main purpose was to focus on the presence and achievement in statistics of women from a wide selection of countries. The papers presented covered a range of topics, not always directly concerned with statistics education, but illustrative of the major involvement of women in the whole spectrum of applied statistics in the

modern world.

The first session, SHE studies statistics, was chaired by Megan Clark who is a New Zealand statistician specialising in education. She is the convenor of the Mathematics Education Unit at Victoria University (Wellington). Three of the four papers; those by Gila Hanna, Sharleen Forbes and Elizabeth Robinson, and Mary Rouncefield, concentrated on gender differences in either mathematics or statistics from an international viewpoint, in New Zealand, and in English schools respectively. Although differences in performance are usually in favour of males, this is not always the case, and the complexity of the situation with respect to different cultures and countries was noted. Saleha Habibullah was the fourth speaker, and she described an experiment in motivation at a womens' college in Pakistan.

Dr Elizabeth Bryan, a former editor for *The Statistics Teachers Network*, chaired the SHE teaches statistics session. The five speakers came from Pacific rim countries: Australia, California, Singapore and The Philippines. Three of the papers discussed methods for teaching statistics in different situations. Ruth Hubbard's paper is included in this volume, as is an abstract for Juanita Manalo. Kay Gilliland from EQUALS, University of California, Berkeley, talked about "Experiences in teaching statistics to students in the early and middle grades". Pamela Shaw (Macquarie University) discussed the aims of a bridging course, and Berinderjeet Kaur the pressure of women as teachers of statistics in Singapore.

Examples of the work of women in statistics in non-education sectors were given in the session, SHE uses statistics. One of the Deputy Government Statisticians of New Zealand, Len Cook, chaired this session. The session began with Helen Wily reading Devaki Jain's plenary paper on "Statistics and Society", as Devaki was unable to attend the Conference. This was a challenging view of statistical indicators as manipulators of society; the full paper is given in Volume 2 of the Proceedings. Dr Birgitta Hedman, who was with Statistics Sweden before she joined the United Nations Statistical Office in New York, discussed the need for statistics on both women and men, and their uses. Valmai Copeland, from the New Zealand Department of Statistics, Wellington, gave some early results from the pilot "Time Use Survey" and talked about its use as a means of valuing household work. The pilot indicated clear gender differences in daily activities, both economic and leisure, with females recording a greater variety of activities. Linda Nicholl's paper focussed on her work as a statistician in the insurance industry, and her abstract is included.

The chairperson for the final session was Dr Jean Thompson from the Applied Mathematics Division of the Department of Scientific and Industrial Research, Wellington. Jean is currently President of the New Zealand Statistical Association, the first woman to hold this position. Megan Clark discussed the current participation of New Zealand women in statistics courses, and Elisabeth Wells highlighted the situation of women biostatisticians in this country. Jo Higgins presented an ethnographic method of classroom research, and the final speaker, Margaret Lafferty from Timaru Girls' High School, Timaru, New Zealand, completed the session with a dynamic discussion, including audience participation, of possible methods of teaching statistics in the classroom.

Many valuable points were made in these sessions. It is the first time that a full ICOTS session has been devoted to gender issues. The interest in the session by speakers, supporters, and attendees indicated that this is an area which should be included and developed in future conferences.