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International Statistical Education Newsletter

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EDITORIAL

Another issue of ISEN is ready, containing two reports and an advertisement. Future issues will no doubt be quite easy to fill with items similar to those that have appeared in the past (reports and news, articles, notices of publications, etc.), but is that what readers want? Or is there some other service that can realistically be provided that would be of more value? Your letters, whether or not for publication, will be welcome.

The editor regrets that the articles and advertisement appearing in this issue have been delayed, just as the previous issue was delayed, so that in effect one complete issue has been lost (that due in January 1984); unfortunately he was unable to meet publication date due to illness.

REPORTS FROM ROUND THE WORLD

The ISI have been connected with, and partially responsible for, the International Statistical Education Centre at Calcutta since its foundation; the Chairman of the ISI Education Committee, Professor J. Gani, has made two visits there in recent years, and the article below is based on these as well as on general experience.

34 YEARS OF TRAINING STATISTICIANS AT THE INTERNATIONAL STATISTICAL EDUCATION CENTRE (ISEC)- CALCUTTA

When the topic of statistical education arises in discussion, most of us think of the academic training in statistical theory and methods provided by many universities throughout the world. This type of training is designed to produce mathematical and consulting statisticians for positions in universities, and in the upper echelons of business, industry and government. Statistics is, however, equally important at the more routine levels of business and government administration, whether in the implementation of demographic surveys, the collection of economic data, the planning of a budget, or the setting up of an operations research project. It is therefore imperative to provide middle rank business managers and civil servants, particularly those in the developing countries, with a systematic background in statistical theory and methods. These subjects would not need to be taught at the level of an advanced university course, but could appropriately concentrate more on techniques and practical applications.

In 1950, in response mainly to the needs of civil servants in the less-developed countries of Asia, the Middle East, Africa, and the West Indies, ISEC was opened on the campus of the Indian Statistical Institute, Calcutta. ISEC is operated jointly by the Indian Statistical Institute and the International Statistical Institute, under the auspices of UNESCO and the Government of India. Its basic funds are provided by the Government of India, while UNESCO is responsible for a subvention which is used mainly to support an annual Visiting Professor.

Various countries in South East Asia, the Middle East, Africa, and the West Indies have sent their civil servants to be trained at ISEC for a period of 10 months (June to March). In 1982-83, for example, there were 25 ISEC trainees from 12 countries: Bangladesh, Bhutan, Fiji, India, the Maldives, Sri Lanka, Nigeria, Swaziland, Sierra Leone, Tanzania, Uganda and Zambia. Since its inception, ISEC has educated nearly 1000 trainees in statistics; some have been supported by their governments and a few by their employers. The UN and its agencies have awarded fellowships to a few others, but the majority of trainees have received modest fellowships awarded by the Government of India, under a variety of Technical Co-operation and Commonwealth plans.

What do ISEC trainees learn? The ISEC course is divided into 2 parts; the first eight months are spent on general statistical methods. This period includes 6 weeks of training in official statistics conducted in Delhi by the Central Statistical Organisation of the Government of India. The remaining two months are spent on some specialized areas of applied statistics such as sample surveys, vital statistics, demography or econometrics. The general syllabus of the course includes a core of mathematics, probability, descriptive statistics, economic statistics, data processing, sample surveys and statistical methods; this is supplemented by additional optional courses in the same topics, as well as in demography, statistical quality control, operations research, economic development and planning and other selected subjects.

The medium of instruction at ISEC is English, and the majority of the 4 dozen lecturers in the ISEC courses are members of the Indian Statistical Institute; currently Dr. N. Bhattacharya of the

Institute is directing ISEC. The devotion of the staff to the education of ISEC trainees is remarkable, and is commented upon very favourably by the trainees themselves. When the trainees graduate, they are given a Certificate, with or without merit, depending on the level of their performance during their training period.

A training scheme of such breadth, catering to candidates of heterogeneous educational backgrounds, having a wide variety of statistical needs, must inevitably encounter some problems. One of these is that the recruitment of trainees is not entirely selective: governments choosing civil servants for training are not always careful to ensure that they have an appropriate academic background. This means that classes may contain a mixture of members, some with a sound mathematical training, and others who are only moderately numerate. A recent tightening of entrance requirements has improved this situation. Another problem is that English sometimes proves a stumbling block with a small proportion of students, for whom it has not previously been the language of instruction. There are also more serious problems: some textbooks are difficult (or too expensive) to obtain, while parts of the training are more relevant to Indian conditions than to those of the trainees' countries. Efforts are being made to include statistical examples from countries other than India in the training courses. A further point is that some trainees have difficulty in adjusting to Indian living conditions, particularly those in Calcutta, which is a large and very congested city.

When, however, one views these problems against the background of ISEC's immense achievements, and considers the 1000 statistically trained young men and women whom it has contributed since 1950 to the government and management of South East Asia, the Middle East, Africa and the West Indies, they appear as minor setbacks in an extremely successful enterprise. One is inevitably forced to ask oneself why the burden of such training rests on India, itself not a particularly rich country, when there are dozens of developed countries in Europe, North America and elsewhere which could meet the expense of similar training programmes far more easily.

Perhaps it is not too late to suggest that Technical Co-operation programmes be set up for the training of statisticians in 3 new institutes similar to ISEC. The UN and its associated agencies could well afford to fund one of these in the USA, another in Denmark and a third in Australia, say, so that instead of the present 25 trainees a year, one could produce 100 for the improvement of government statistics throughout the world. Such a contribution might not resolve every international problem, but it would indicate to the less-developed nations that the favoured Western countries are as willing as India to help them overcome their problems of organisation and administration.

University of Kentucky J. Gani
April 1984

There have been two large individual projects on statistical education based at the University of Sheffield in the past, but a more permanent umbrella organisation, probably unique in the world, has recently been set up, as the director reports in the next article.

CENTRE FOR STATISTICAL EDUCATION - SHEFFIELD ENGLAND

The Centre was established in September 1983 and formally opened on 24 October 1983. It is a co-operative venture between the University of Sheffield and Sheffield City Polytechnic and follows much successful work in statistical education carried out in Sheffield over the previous eight years. The six year Schools Council Project on Statistical Education for pupils aged 11-16 was followed by the Statistical Education Project for 16-19 year old students funded by the Leverhulme Trust. During this time also, with the active support of the ISI, the journal Teaching Statistics was founded and the first International Conference on Teaching Statistics was held. Alongside this activity, based at the University, Sheffield City Plytechnic was running an active programme of in-service courses for teachers, with workshops and associated publications.

The Centre seeks to play a national and international role in all aspects of statistical education. The main aim of the Centre is to support the development of statistical education at all levels by working with schools, colleges, industry, commerce, and national and international organisations. Within the general aim there will be specific work on developing apropriate teaching materials, strengthening links between education and industry, advising on syllabus development, carrying out research into how pupils learn and use probabilistic and statistical concepts, being a resource centre for national and international materials on statistical education and providing a base for visitors and staff researching into the teaching and learning of statistics.

In the first year the Centre has run a number of short courses for teachers based on local needs. It has published the first few of a series of short booklets on introducing probability and statistics into the early secondary school curriculum. It has representation on several of the national examination bodies and has advised on syllabus development in this area. On contract from the British Broadcasting Corporation it has developed a suite of computer programs for teaching statistics using the BBC Micro-computer entitled Advanced Studies - Statistics. These programs are marketed by the BBC.

The Centre welcomes visitors, whether they just want to browse and discuss problems in teaching statistics or to come to work on a short or long-term basis. Thanks to a small grant from the ISI we are able to give a very limited amount of support to visitors from outside the UK. There is also a programme whereby teachers work in the Centre for a term at a time. This is funded by the Department of Education and Science.

Currently the Centre is seeking funds to build up its permanent staff and other resources. Several proposals have been made to different bodies for funds for specific projects. It is continuing to run initial and in-service courses for teachers to develop and build up a resource of teaching material that can be used for other purposes.

Publications available from the Centre include Statistical Education and Training for 16-19 year olds, Proceedings of the First International Conference on Teaching Statistics, and Project Work in A-level Statistics. Other reports and resource booklets are always in preparation. Orders for the journal Teaching Statistics (see ISEN No.1 and also Vol.3 No.1) may be sent through the Centre, which also keeps recent information on the Schools Council and Leverhulme Projects.

For further information on any aspect of the Centre's work, including prices of its publications, and for a free newsletter describing current activities write to P. Holmes, Director, Centre for Statistical Education, 25 Broomgrove Road, Sheffield S10 2NA, UK.

VACANCIES

Notices are free of charge for (non-commercial) teaching positions in statistics in less-developed countries.

ETHIOPIA, Addis Ababa University (Department of Statistics, Faculty of Science).

Associate or Full Professor. Specialising in multivariate analysis and/or time series analysis, with wide experience of using statistical packages (BMDP, SPSS, etc.). Teaching in English. M.Sc. level. Expatriate terms available: 1 year contracts, renewable. Contact Dr. Alemayehu Melaku, Chairman, Department of Statistics, Faculty of Science, Addis Ababa University, P.O. Box 1176, Addis Ababa, Ethiopia.