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Report from the IASE President 2001, Carmen Batanero



This year we celebrate the **ICOTS-6 Conference** in Durban, South Africa, which is organised by the International Association for Statistical Education (IASE), the International Statistical Institute (ISI) and the South African Statistical Association (SASA). As the conference theme for ICOTS-6 is '*Developing a statistically literate society*', special sessions on statistical literacy are planned. By now the ICOTS-6 programme is almost finished thanks to the excellent work by the IPC Committee and our local organisers, chaired by Delia North, who are doing their best to receive us and make us feel as home while in South Africa. The IASE is also making an effort to help people from developing countries to attend by paying the registration fees for a number of delegates from these countries. ICOTS is the main event in statistics education, which is only organised once every four years, with the aim of providing the opportunity for people, who are involved in statistics education, from around the world to exchange ideas and experiences, to discuss the latest developments in teaching statistics and to expand their networks of statistical educators. I encourage you not to miss this event and to contribute to what promises to be a memorable conference. A full description of all details about ICOTS-6, including periodic updates of the scientific programmes and papers abstracts, is available in the ICOTS-6 IPC website (<http://www.beeri.org.il/icots6/>).

We are also working to prepare our programme for the **54th Biennial Session of the ISI** to be held in Berlin, Germany in August 2003. We have a wide and varied list of topics for Invited Paper Meetings, both those organised by the IASE alone and in conjunction with other ISI Sections and Committees. In 2004, the **ICME-10** (International Congress on Mathematical Education) will be held in Copenhagen, Denmark. Conversations are being held to help in organising some statistical education activities during the conference. Immediately before or after ICME-10, we will celebrate our next **IASE Round Table Conference** at a location close to Copenhagen. The theme of the conference will be "*Curricular Development in Statistics Education*" to reflect the increasing interest towards the teaching of statistics within school curricula (see information in this issue).

As regards publications, the title of the *Statistics Education Research Newsletter (SERN)* will be changed to *Statistics Education Research Journal (SERJ)* effective with the first issue, which is planned for May 2002. Along with the title change, there will be progressive changes, with the aim of making (*SERJ*) a main tool to foster research in statistics education. We plan to continue our policy of collaboration with other associations and professional bodies interested in statistics education. Many people are helping the IASE in a number of ways including being a National Correspondent in their country, as organisers of sessions for ICOTS-6, the ISI-54 Session or in other meetings, as speakers or discussants in any of our conferences, in providing information for our publications and in helping recruit new members. We hope to continue receiving your help in all these tasks in the future, since it is only with the help of all members that IASE can continue to be a strong association. I look forward to a fruitful two years ahead for the IASE.

International Association for Statistical Education

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IASE web page: <http://www.cbs.nl/isi/iase.html>

CONFERENCE REPORTS

European Workshop on the Teaching and Diffusion of Statistics, Palma de Mallorca, Spain, October 10-11, 2001

Mauricio Beltrán, mbeltran@ibae.caib.es

This meeting was organized by the General Council of Economy of the Balearic Islands Government (Spain), through the Balearic Institute of Statistics with support by Eurostat and other European Statistical Offices. Conference topics included: Experiences in the diffusion and teaching of statistics, Statistics and the wider society, Statistical literacy, Attitudes towards statistics, Teaching of statistics, Statistical training for business and professional work, and Teaching resources: software, multimedia, Internet. Participants included over 70 representatives of the main national and regional statistical offices in Spain and other European countries, university lecturers and secondary school teachers. Presentations were organised in two main streams: *The teaching of statistics* and *Statistical offices activities in the diffusion of statistics*.

About 30 papers were received from Argentina, Chile, France, Israel, Italy, Portugal and Spain. The Institute is now producing a book with these papers, which will be published in their original language and will include a summary in Spanish, English, Catalan and French. More information is available from the Institute (phone: 0034 971 176755), e-mail (ibae@caib.es) or, from the conference web page:

http://www.caib.es/ibae/esdeveniment/jornades_10_01/main.html

FORTHCOMING CONFERENCES

Hawaii International Conference on Statistics and Related fields, Honolulu Hawaii, USA, June 5-9, 2002

statistics@hicstatistics.org

The Conference will provide many opportunities for academicians and professionals from statistics and related fields to interact with members inside and outside their own particular areas of specialization. Cross-disciplinary submissions are welcome. Topic Areas include also Teaching of Statistics.

The Hawaii International Conference on Statistics and Related Fields encourages the following types of papers/abstracts/submissions for any of the listed areas of Statistics: research papers and completed papers, abstracts and abstracts of completed or proposed research, student papers and research by students, poster sessions/research tables and informal presentation of papers or abstracts, work-in-progress

reports or proposals for future projects, reports on issues related to teaching. Panel discussions, practitioner forums, tutorials and workshop proposals are invited.

For more information: <http://www.hicstatistics.org>

International conference on The Humanistic Renaissance in Mathematics Education, Palermo, Italy, September 20-25, 2002.

Alan Rogerson, arogerson@vsg.edu.au

This conference follows the successful international conferences in Egypt 1999, Jordan 2000, Poland and Australia 2001, all organized by the Mathematics Education into the 21st Century Project. This project is a non-commercial educational project dedicated to innovation in mathematics education throughout the world. It promises to be an important and enjoyable event, especially as we will be starting to implement a new initiative: WWM - World Wide Mathematics (or Super-Course).

For a copy of the First Announcement, please email arogerson@vsg.edu.au

IASE 2004 Research Round Table on Curricular Development in Statistics Education

Gail Burrill, gburrill@nas.edu

The goal of the *Round Table Conferences* is to bring together a small number of experts, representing as many different countries as possible, to discuss one another's views and approaches on a given topic area. The Round Table Conferences provide opportunities for developing better mutual understanding of common problems, and for making recommendations concerning the topic area under discussion. A main outcome is a monograph containing a set of papers, which have been prepared for, and discussed during, the conference. This monograph presents a global overview of the conference subject, to serve as starting point for further research on the selected theme.

The topic for the IASE Round Table Conference in 2004 will be *Curricular Development in Statistics Education*. The need for processing the increasing amount of data people receive in the course of their work and lives has made it imperative that students leave elementary and secondary schools prepared to make reasoned decisions based on sound statistical thinking. Countries and communities have approached this problem in different ways. The Round Table will provide the opportunity for sharing what works and to highlight the challenges and potential solutions researchers have faced as they design and implement curricula to produce statistically literate citizens. The Round Table will be held in close proximity to the Tenth International Congress on Mathematical Education, which will be held in Copenhagen,

Denmark in 2004. As soon as plans for the specific site and dates for the Round Table are firm, they will be posted on the IASE website.

Those interested can contact:

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NEWS FROM AROUND THE WORLD

The interface between school and university statistics

*Margaret Rangecroft, F.M.Rangecroft@shu.ac.uk
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At a recent workshop for statistics lecturers run by staff from the Royal Statistical Society Centre for Statistical Education discussion turned to the problem of recruiting students onto undergraduate statistics courses. For many of the participants this was a very real concern – with statistics courses and, in some cases, whole statistics departments closing down. It was suggested that it was an issue in many other parts of the world too.

So much has been done to promote statistical education by organisations such as IASE and national bodies such as the RSS in the UK and its counterparts around the world but we are still having problems encouraging students to take up statistics degrees. In our experience here at Sheffield Hallam University (SHU) the problem does not seem to occur at the postgraduate level where applications for our MSc in Applied Statistics are very strong. Our graduates have no problem obtaining jobs, generally with very high salaries and excellent promotion prospects, but this message does not seem to be reaching the schools. A recent initiative by the RSS that involved sending an excellent brochure about statistics out to all schools has tried to address this problem. Only time will tell how successful this has been, as the effects will take some time to work through the system.

My own view is that the problem arises largely from the way statistics is taught in schools. There is a desperate shortage of teachers here in the UK, particularly mathematics teachers. Those who are doing the job are working very hard but teaching statistics is just one of their many responsibilities. In fact, with the teacher shortage, it may even be getting worse with more and more non-mathematicians teaching both mathematics and statistics. I run a postgraduate course here at SHU specifically for teachers of statistics and I am still getting application forms stating things like 'I would like to develop my teaching of statistics because, although I teach it at

advanced level I have had to learn it myself from books and am not very confident'. It is very hard for teachers in this position to communicate the excitement and enjoyment to be found in statistics. In many cases it becomes a rather dry application in which to practise mathematical techniques, despite the improvements to syllabuses in recent years.

The problem is how to break this vicious circle of teachers and students who do not get a true flavour of statistics. One way is to include more statistics in initial teacher training course for mathematics teachers and efforts have been made in this direction, but the tiny numbers of students taking these courses make progress slow. The other approach is to run in-service courses for existing teachers. These can take many forms from day workshops through to one week courses on, for example, Advanced level statistics, to course such as the one I run here at SHU which leads to a masters degree in Applied Statistics with Statistical Education. Our course is delivered by distance learning to students all over the UK and, increasingly, overseas.

The advantage of this format is that teachers can work through the units in their own time without requiring time off work (except for examinations and one weekend study school per year) and hence without this expense for their employers. For us, as the providers, it means that we can attract sufficient students for the course to be economically viable which would almost certainly not be the case if students were limited to the local area. The course requires students to have studied only a substantial amount of mathematics in their first degree (thus opening the way for teachers of 'user' subjects) but we do not assume any in-depth knowledge of statistics. We then teach them both statistics and how to develop their own teaching of the subject. The statistics they are taught is very much geared to real life applications and we try to convey through this the value and interest of the subject. The course culminates in an individual Project in which they carry out a statistical investigation in the area of statistics education. The teachers themselves gain many skills and also a Masters qualification that greatly enhances their promotion prospects. There are two versions, one for schoolteachers and the other for teachers and lecturers in the tertiary sector. The course has been running now for more than ten years and many of our former students have contributed a great deal to the statistics education community. Unfortunately perhaps, many of them have progressed so far as to have moved out of classroom teaching but are still working in associated areas where they have their own influence, for example as writers of teaching materials and in advisory capacities.

We feel that those who are still 'at the chalk face' are carrying forward the message of the importance of statistics and its attractions as a career choice to the pupils they teach. The numbers we enrol each year are not large but it is hoped that with all the other statistical education initiatives they will begin to reverse this downturn in interest in the subject at first degree level. I would certainly recommend this approach to anybody who is keen to influence teachers in favour of statistics.

Please send your comments to the editor of IASE MATTERS gilberte.schuyten@rug.ac.be

University statistical education from the unifying Europe's point of view

Richard Hindls, University of Economics, Prague

Josef Štěpán, Charles University, Prague

Stanislava Hronová, University of Economics, Prague

The study of statistical disciplines has long and rich tradition in the Czech Republic. The beginnings of modern statistical education go back as far as the period between the two world wars. After World War II Czech university statistics maintained both a high degree of independence and a good professional position on the international scale. It can be demonstrated by the number of original studies from this time (Hájek, Likeš et al.), contributing to the development of both statistical theory and practice in the Czech Republic and abroad. During the 1990s, radical changes of social structure took place in the Czech Republic.

Besides the natural development of statistics as a general subject of science, new demands of the unifying Europe markedly influenced the contents of university statistical education.

Nowadays, education in elementary statistics and statistical methods (3 or 4 hours weekly) is obligatory in practically all non-statistical subjects in economics faculties. Traditionally, highly specialized education in statistics is offered at two universities: at Charles University in Prague and at the University of Economics in Prague.

The standards of European statistics make some new and special demands on statistical education too: with respect to the application of statistical procedures and tools in economics, and to the relationship of statistics to general economics subjects.

In this respect, since 1990 the faculty of Mathematics and Physics has been gradually developing the following fields of MSc and PhD studies: Econometrics, Insurance and Financial Mathematics, Statistical and Insurance Engineering.

The study of these subjects proceeds generally using the basic building blocks found worldwide in those university statistics courses with an economic

specialism (probability calculus, a broad range of statistical methods, topics in economic statistics, demography and actuarial science, econometrics, financial and insurance mathematics, computational statistics). But, simultaneously, it tries to map and transfer into education some special approaches and demands arising as Czech statistics works towards the standards of European statistics. New demands of the unifying Europe are leading to modification of contents of particular courses. It is particularly noticeable in the areas of national accounting, price and industrial statistics, sampling surveys, time series, conjuncture analysis and computational statistics.

This orientation is not just an interdisciplinary approach in education in economic subjects. It is also a reflection of the trend, which is undoubted and generally recognized both in contemporary economics teaching and in practical economics – the creation of a sense of *belief* with respect to possibilities of statistics in economic applications. Increasingly, we live and will live in a world of judgements. Thus, all approaches and generalisations offered by statistics must be *convincing* for a user; otherwise they will not be accepted with confidence. For this purpose, it is necessary to have close cooperation of both groups of participants – statisticians and users, with the assumption of mutual understanding. And this condition must be manifested in all spheres of education in statistical disciplines.

INTERESTING WEBSITES

<http://www.sop.inria.fr/mefisto/java/tutorial1/tutorial1.html>

Offers exciting animations and java applets.

<http://www.ugr.es/~iase/Hipotesis.htm>

For those who can read Spanish! Prepared by our IASE National Correspondent in Venezuela, Audy Salcedo.