TWENTY YEARS OF "TEACHING STATISTICS"

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This paper outlines the aims of the international journal Teaching Statistics. It emphasises the journal's intention to support statistical education at school and early-university level, not only in respect of specialist statistics classes but also in respect of the use of statistics in other disciplines. An outline is given of the sort of articles the journal wishes to publish and of the progress of articles through the refereeing and publication process in recent years. A breakdown of current subscribers is given. Finally there are a few speculative pointers towards the future.

The journal *Teaching Statistics* was launched in 1979 in Sheffield, England, under the Editorship of Peter Holmes. At the start of 1987, Peter was succeeded by David Green and he handed over to Neville Hunt during 1993. It has been my privilege and pleasure to receive the Editor's mantle (and red pen) from Neville during the summer of 1997. It is indeed a very powerful act to follow, made easier by the fact that all three previous editors continue to serve the journal very closely in several capacities.

Teaching Statistics is dedicated to coverage and support of statistical education. It is aimed at teachers and their pupils/students in the 9-19 age range. This range is intended to start with what in Britain is referred to as primary school and then to proceed through all levels of secondary school and into university. No doubt there could be a lively debate as to what is (or ought to be) taught to 19-year-olds, but in any case the age range is not intended to be absolutely strict and exclusive. Nevertheless, it is the intention that everything published in the journal should be of at least some interest to school teachers at some level.

However, this does not necessarily mean just the specialist teachers of statistics, or even teachers of mathematics. The journal also sets out to be of use to teachers and pupils in other disciplines where serious use is made of statistics. Thus the intention here is to help and support the economists, the geographers, the physical scientists, the business and management studies people, the psychologists and other social scientists, indeed everybody who has a real interest in statistics as a part of the totality of their teaching. Hopefully this will do something to help dismantle barriers and to reduce the fairly lonely isolation that individual statistics teachers, or teachers who try seriously to use statistics, can sometimes feel - and this can apply just as much in university communities as in school ones.

The journal is published three times per year. By the time of ICOTS-5, the journal will be two-thirds of the way through its twentieth year and 59 issues will have come out. The Summer 1998 issue (Vol 20 No 2) has been deliberately designed as something of a "special" to accompany ICOTS-5 with a number of specially commissioned articles, though it contains many of the usual regular features as well.

The idea of having "usual regular features" in a fairly formal sort of way resulted from a review of editorial policy some ten years into the journal's life. A deliberate decision was made at that time to try to provide more material of direct use in the classroom. There was, however, no intention of abandoning articles relating to the teaching of somewhat more advanced aspects and applications of statistics. These articles were known to be valuable to readers based in universities and colleges and, in the absence of any other international journal devoted to statistical education, there was nowhere else where such material could be found. So the journal was enlarged in size, assuming its present 32-page A4 format, and special sections were introduced so that articles of direct relevance to the classroom could be carried regularly. All these special sections still operate. For example, there is a section "practical activities" that gives suggestions for classroom or out-of-classroom work; "computing corner" gives suggestions for statistical work based on modern software, including both specialist statistical computing programs (such as Minitab) and spreadsheets (such as Microsoft Excel); and "curriculum matters" considers topics relating to curriculum and assessment. Some further special sections have since been added. Thus "standard errors" was set up to provide a forum for the lively and constructive discussion of pupils' common misconceptions and how they can be overcome by the teacher; and "net benefits" is a recent addition which presents a wealth of information about statistical information and teaching resources that can be accessed through the World Wide Web.

Each issue now contains in the region of 8-10 articles, the exact number obviously depending on their lengths. Excessive length is strongly discouraged; only very rarely would an article occupying more than four journal pages be published. The journal also carries book reviews, an increasing number of software reviews and a general "news and notes" section.

Axiomatically, the journal can only publish that which is submitted to it. Submissions of articles relevant to the journal's aims are very welcome! *Teaching Statistics* is a refereed journal and requires and maintains good standards, both from the

point of view of the intrinsic interest of the material in articles and in respect of technical accuracy. Maybe occasional errors creep through, but it is hoped not many! In any case, most submissions are both interesting and technically sound. As a snapshot of "work in progress" in this regard, by the end of 1997 a total of 836 articles had been submitted of which just over 500 had either been published or were awaiting publication. This is a long-run average submission rate in excess of 40 submissions per year with a publication rate of around 60-65%. This shows quite good health both in quantity and in quality. The journal has rarely been short of articles, on the contrary there have been periods when modest back-logs have built up. Every effort has been made to clear these. A time to publication of around a year, from first submission, through the refereeing process and any subsequent revision, to final appearance of the article, is generally achieved or beaten.

Detailed data on the progress of articles in the last five years is given below. It should perhaps be noted that "submissions" includes some short items such as letters or cartoons; also there is a small amount of double-counting in that there are a few re-submissions of new versions of earlier articles that had previously been rejected or withdrawn. "Published" articles includes those that have been finally accepted for publication but have not yet appeared (many of those for 1997 will in fact have appeared by now, in one of the first two issues of 1998). "Rejected" includes a few articles withdrawn by authors as well as articles rejected by referees. "With referees" includes articles whose authors are currently considering the referees' comments.

	Submissions		Published	Rejected	With referees
1993	38	of which...	24	14	-
1994	53	of which...	27	26	-
1995	51	of which...	24	27	-
1996	43	of which...	22	20	1
1997	55	of which...	22	15	18

Articles submitted 1993-1997, situation as at 31 December 1997.

Apart from the rather strange "dip" in 1996, it can be seen that the number of submissions has been running healthily above the long-run average during the last few years. Less happily, the rejection rate has also been high, though this is in fact no longer the case with the 1997 submissions - the majority of the articles shown as "with

referees" (as on 31 December 1997) have now been accepted for publication, indeed some have already appeared during 1998.

The journal's subscribers are spread all round the world. They include schools/colleges and universities that subscribe corporately; teachers at all levels and other individuals who subscribe privately; subscriptions placed through agencies; and, as with any market analysis, a few assorted "others"! The table below shows a breakdown of the current subscribers by broad geographical area and by sector, giving the percentages in each cell. In this table, the "other" category has been expanded so as to include the subscriptions that are placed through agencies. There are slight discrepancies with the row and column totals in the table due to rounding.

	Schools/ colleges	Universities	Personal	Other	TOTAL
UK	30	7	14	3	54
Rest of Europe	2	5	3	3	12
USA	4	6	7	1	18
Rest of world	3	8	3	1	15
TOTAL	39	27	27	8	100

Percentages of current subscribers.

This is of course just a snapshot of the journal's current subscribers. The list has developed and changed over the years, from fairly small beginnings. Maybe we can enter new sectors, and even new countries, through new subscriptions taken out by delegates to ICOTS-5.

As for the future of the journal itself... . I am very mindful of the statistician's well-known maxim "never forecast, particularly the future"! Nevertheless, I should think I am on fairly firm ground in expecting that the recent explosive growth of interest in, and articles on, spreadsheets will continue. Quite likely there will be other new developments in statistical computing, too. Use of the World Wide Web as a teaching and learning resource can also be predicted, and should be welcomed with enthusiasm. As has been mentioned previously, the journal already has a special section devoted to use of the Web, and I can easily anticipate more articles involving it. One other development that I would

very much like to see is an increased number of articles on statistics in other disciplines.

But all this depends on what you, the existing and potential authors, submit to us. To re-emphasise a point made earlier, submissions are very welcome. You can write direct to me as Editor at the address given at the head of this paper, or you can contact me on email (gerald.goodall@brunel.ac.uk). The journal itself has a Web site that you may like to visit (http://www.maths.nott.ac.uk/rsscse/TS). Happy writing!