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# Tutorial Tennis

Distance Learning in Preparation for the Examinations of The Royal Statistical Society

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In the early 1980's a taught course was offered at a local Southampton college with the aim of preparing students for entry to the examinations of the Institute of Statisticians. There was a dearth of students willing to commit themselves to part-time study and so the courses were withdrawn. However, we sensed that there was a demand particularly from mature students to improve their statistical knowledge. So we began to convert the classroom notes into a number of self-contained study guides with exercises based on the learning material.

Now that the students could learn "at a distance", their numbers began to grow locally, nationally and internationally. The then Institute of Statisticians was aware of our courses, and introduced prospective students to us. Marketing was easy! Our venture into distance learning started in the early 1990's when the courses were transferred to the Department of Social Statistics. So where are we in 2002? What do we do and who are our students? And what's it got to do with tennis?

## *Stages in Student Enrolment*

**(a) The Welcome Booklet:** The game of tennis begins when a prospective student shows interest in our courses and makes contact by telephone, fax, e-mail or letter. We have a link on the Departmental website and also printed brochures giving details of the courses.

Those who make this initial contact have various backgrounds ranging from an absolute beginner who could be a clerk in a statistical department or someone who needs to change direction at work having previously graduated with a degree in Economics or even in Classics. Once a suitable level has been determined, the student completes an enrolment form and pays a course fee and in return is sent our "Welcome" booklet. This describes how the course proceeds and what is expected of the student.

And so the game of tennis has begun! The first "serve" was the request for information. The "ball" was returned as a request to complete the enrolment form and for the student to introduce himself to the tutor. The "Welcome" booklet was sent in response to the enrolment. The interplay between student and tutor resembles further volleys.

On the last page of the "Welcome" booklet is a plan of the course and students are invited to add the dates when they plan to submit their assignments for marking.

Knowing that our students are busy and mature people, it is essential that they are not over-ambitious and can fit their study periods around other important events in their lives. Many will have deadlines to meet at work and some will know that, for example, March is concerned more with the end of the financial year than with study and that they could not concentrate whole-heartedly on their studies at that time. Others will have planned family holidays, or even have planned for a family! Students are asked to look at their diaries and to add sensible dates to the plan of the Course. No two students will have the same set of dates and from this point on each is considered as an individual rather than as a class member. This also means that we enrol students at any time of the year.

**(b) Receiving the first Study Guide:** As the game of tennis proceeds, the receipt of the provisional timetable by the tutor is a signal for the first two of the thirty-five study guides to be sent by post. Students are asked to start work on the first book. Sending two books ensures that they always have some work in hand in case the tutor is slow to respond or there is a postal delay. They are reminded that the material they receive is just a guide and needs to be digested in small amounts and studied in sequence.

### ***Content of a Study Guide***

Each study guide contains three parts which are colour-coded for easy identification. The first part offers explanations of statistical topics. Another part provides examples of examination-type questions. Suggested solutions for these “Answer” problems are placed in a sealed envelope and sent inside the study guide. Students are asked to try to solve the problem first and then to open the envelope! The third part consists of “Tutor” examples that are often taken from past examination papers. No solutions are offered because the tutor needs to see how the student has tackled each problem and give guidance when some reassurance is needed. The tutor also offers comments on presentation and interpretation.

In a game of tennis, the ball can go “wide” or hit the net and this interrupts the flow of the return. Similarly, the pattern can be broken for our students. When it is clear to the tutor that a student has not understood a particular point, new notes are created and sent to the students and if the modified explanation is found helpful, then those notes are incorporated into future editions of the study guide. Hence the presentation and content of the learning/teaching material are being continually updated.

### ***The Subject Matter***

Today, we prepare students for the examinations of the Royal Statistical Society. The syllabuses for these examinations form the basis of the subject matter in our study guides. The examinations are at three levels: Ordinary Certificate, Higher Certificate and Graduate Diploma (with four core papers and one Option paper).

Details of the objectives and syllabuses may be obtained from the RSS.

The official objectives of the RSS examinations, are in turn, the objectives of our courses. On a broader front, we hope to give our students the opportunity to continue their professional training.

### ***The Student’s Responsibilities***

You cannot play tennis on your own! Students have to be active and relate to their tutor. All students will read the same printed words but their responses will be personalised as they **read** their favourite text book, **make their own notes** and continue the communication exercise by **contacting their tutor** whenever they need help. They should not be afraid of making a nuisance of themselves – their tutor is available for them individually.

We are aware of the sense of isolation that Distance Learning students often experience. One way to alleviate this is through the “network” where two or more students working at a similar level can communicate with each other. Another is through our “Winter School” which runs for three days each January. The aim is to bring students into the University environment from their places of work and to introduce them to each other and to their tutors. Also, if students live near Southampton and need individual help, then they are encouraged to meet with their tutor at the University. From time to time, an employer like the ONS or DEFRA will invite the tutor to visit the students at work for a one or two day tutorial.

### ***Our Current Students***

At the moment our students are spread worldwide. Nearly all are employed and many have their course fees paid by their employer even if no study leave is granted. Some students do pay their own fees. We have offered bursaries to a small number of these students. Apart from students who are “resting” and who may suddenly wake up, we have 56 students on our books today.

### ***How do we view our strengths and weaknesses? - Perceived Strengths and Weaknesses***

By giving students a quick turn round on their marked assignments students feel that their attempts are important and this encourages the keen ones to make further effort. Here the game of tennis moves with real enthusiasm. There are some students who for various reasons such as illness, busyness or family pressures or loss of interest appear to fall by the wayside. Sometimes a student appears to have dropped out and then I receive a message that says: “Do you remember me? Can I pick up where I left off one or two years ago?” Our version of Distance Learning encourages such flexibility. We do not hurry them although lax students will occasionally receive a reminder asking them if they are experiencing problems with a particular topic and to contact their

tutor so that they can be re-directed.

Sixteen per cent of this year's students moved from one study guide to the next in less than one month, but some of the African students who were out on field work took 6/9 months between submitting assignments. This very slow game of tennis has not helped their progress! Certain students lack motivation often because their employer offers no reward for success in examinations.

From this you will see that the one-to-one contact between a student and a tutor forms a relationship similar to that of two tennis players, where each is alert to the movement of the other and responding as necessary.

### **Summary and Recommendation**

Our courses have the following characteristics:

- We have no need to advertise – students are looking for a course.
- The syllabuses are broad in nature but the Option paper at the Diploma level gives depth.
- Students are responsible for their own learning and work at their own pace.
- Some students are unable to gauge the amount of time required for study.
- Interest is maintained by having one study guide in hand.
- It is essential that work is submitted for marking and feedback.
- Study guides are being constantly edited in the light of student responses.

The RSS has three levels. Candidates may terminate their studies after any one level and be awarded, after suitable practical experience, with the appropriate qualification. We do encourage them to continue to the next level but many are content with an intermediate qualification because it is sufficient for their needs, time or abilities. Many students as statistical consumers need to know enough Statistics to be able to communicate with statisticians who have attained the Graduate Diploma.

In our experience the most difficult transition for students is from the non-calculus based Ordinary Certificate to the calculus-based Higher Certificate. This requires a considerable investment in learning new mathematical skills which a large proportion of students find daunting, yet they are still keen to extend their statistical knowledge. Perhaps a new terminal route to a non-calculus based "Advanced Ordinary Certificate" might be considered. This could expose students to statistical ideas beyond that of the Ordinary Certificate but without the need to make the investment in improving their mathematical skills first. This could be a valuable terminal qualification and perhaps also increase the longer term recruitment to the Higher Certificate.

