

DEVELOPING STATISTICAL CONSULTANCY SKILLS IN POSTGRADUATE STUDENTS

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INTRODUCTION

Training of postgraduate research students in transferable skills has been recognized as a necessary part of statistics postgraduate training since the early 1970s. For statisticians, it is important that consultancy skills are developed, where the statistician learns to listen and communicate with clients from a wide variety of background and skills levels. Previous studies have focused on teaching such skills through formal courses (Baskerville, 1981) or role-play (Taplin, 2007). Lancaster University has a centrally funded statistical consultancy service which provides support to postgraduates and staff from other disciplinary areas. While traditionally, consultancy has been provided by staff members of the Department of Maths and Statistics, we developed a pilot programme which involved taking a small number of doctoral students and involving them intensively in specific consultancy projects.

STATISTICAL CONSULTANCY AND SKILLS DEVELOPMENT

Three distinct models were followed. In the first, the student attended all consultations between the client and the experienced consultant, and observed the sessions, and discussed them later. In the second, the student attended and participated in a number of early consultations, before taking charge of later consultations on their own. For the third model, a more extensive participation took place, with the student taking control earlier in the process, but with the experienced consultant on-call for advice over a period of two to three months.

The students were asked to review the research problem of their client and then provide appropriate guidance and support in addressing them. The students were not required to perform the analysis themselves but provide the training that would enable the client to address his/her research problems. We describe the nature of these consultations through three case studies, how these consultations were negotiated toward satisfactory conclusions under the three models and we reflect on the relative value of the differing student experiences.

REFERENCES

- Baskerville, J.C. (1981) A Systematic Study of the Consulting Literature as an Integral Part of Applied Training in Statistics. *The American Statistician*, 35(3) 121-123
- Taplin, R. (2007) Enhancing Statistical Education by using Role-plays of Consultations. *Journal of the Royal Statistical Society A*, 170(2), 267-289