

## Abstracts

### **The Ethnographic Approach to Classroom Research**

Joanna Higgins - Wellington, New Zealand

The paper considers the place of qualitative research in education, examining the significance of social context as a source of meaning for classroom processes. Ethnographic research methodology is considered as an approach to answering the question "What is happening when young children are working independently as part of a mathematics programme in a junior classroom?". There is strong potential for this methodology in classroom-based research.

### **Teaching Statistics in Schools - Philippine Experience**

Juanita A Manalo - Manila, The Philippines

Filipinos are natural gamblers; we bet on anything and everything besides horses. Our perception of risk is often irrational. We are subjected to opinion polls provided by the media, without being able to question the accuracy of their reports. As such, we need to understand some of the ideas of probability and frequencies. Understanding statistics is important for individuals in their daily lives and, as citizens in a democratic society, statistics must be taught directly or integrated in the teaching of science or other courses, especially at the lower levels of education where only a minority ever reach college.

*How effective is the teaching of statistics in the Philippines?* Statistics is integrated in a limited manner at the elementary level with private elementary schools teaching a little more than the public schools.

At the secondary level, it is taught separately as a required or optional subject in both sectors, with public sector and state schools teaching more than the private counterpart. Integration takes place in mathematics and in the natural and social sciences and in research. The limited teaching as a separate subject and integration in other subjects may fail to completely develop among the pupils the intuitive notion of

randomness, representativeness in sampling, or accuracy in the interpretation of results. Missing also in many schools are the studies of probability, mean, mode, median, standard deviation, and correlation, necessary in the presentation and solutions of problems.

Faced with this limitation, the objective to make Filipinos understand statistics in order to apply them in their lives may therefore not be fully attained. This, together with the serious problem of a high percentage of school children dropping out even before they finish elementary school, may keep them "statistically illiterate" forever.

## **Build Your Own (BYO) Job**

Linda Nicholls - Auckland, New Zealand

A brief reflection on the experiences of a New Zealand woman statistician. Comments were made on the value of formal and informal training in the academic environment, the issues and problems faced upon moving to a private sector position (in insurance), and the potentially valuable contribution of statistics and statisticians to the management decision-making process.

## **What Should a Bridging Course Bridge?**

Pamela Shaw - Sydney, Australia

This paper describes a course aimed at mature age students who are lacking in basic mathematical skills and who are anxious about mathematics but who are required to do a service course in statistics. The course aims to improve basic skills and attitudes to mathematics and, in addition, to move students from a rule-based approach to mathematics and statistics to a more flexible one. Flexibility in mathematical thinking is required if students at a later stage are to be able to consider and assess the relative merits of different ways of analysing batches of data. Basic skills and attitudes both before and after the course have been measured using an author-prepared test for the former and an attitude to mathematics [Fennema] test for the latter. Mathematical thinking has been measured by using material based on the SOLO (Structure of the Learned Outcome) taxonomy. There has been some evidence of a change in basic skills and attitudes to mathematics over the duration of the course, but to date there has not been an accompanying change in the level of mathematical thinking.