

Session A2

Teaching Statistics at Primary Level

- Organiser:** Lionel Pereira-Mendoza (Newfoundland, Canada)
- Invited Speakers:** Andrejs Dunkels (Luleå, Sweden)
 Margaret Gallimore (Sheffield, England)
 Joanna Higgins (Wellington, New Zealand)
 Lionel Pereira-Mendoza and Judith Mellor
 (Newfoundland, Canada)
 Susan Jo Russell (Cambridge, Massachusetts, USA)
- Abstract:** Isolde Kinski (München, Germany)

Introduction

The session was designed to give an overview of various aspects of the teaching of statistics to young children. The papers and discussion addressed different aspects of statistical education, including curriculum issues, pedagogical considerations, teacher training and research, although most papers cannot be classified as fitting under one specific heading. What follows is a *very brief summary* of the general thrust of the papers that comprised the session.

Andrejs Dunkels presented a report on work that he had undertaken with stem-and-leaf plots and box plots. The report was supported with the presentation of childrens' work. This presentation provides an excellent model of what could be achieved in statistical education. It shows how statistical concepts could be utilised to develop other significant mathematical ideas and, particularly through the childrens' work, indicates the high level of understanding and graphical comprehension that can be achieved.

Margaret Gallimore presented a hierarchical model for developing graphicacy in the primary curriculum. The model stresses the importance of a progression in graphical work. As she indicated, it was not meant to be a rigid, finalised version; rather it is designed to provide an initial framework for discussion. Readers interested in teaching statistics to young children will find this article an excellent basis for developing their own curriculum plan.

Joanna Higgins gave an overview of the New Zealand scene and discussed the theoretical underpinnings of the approach to statistical education. It provides a framework within which the general approach and role of statistics in the curriculum can be addressed.

Lionel Pereira-Mendoza and Judith Mellor presented a research report on childrens' understanding of bar graphs. An analysis of the data indicated that, while children have few problems with the literal reading of graphs or interpreting graphs, there are many problems with prediction, including misconceptions involving the role of patterns, topics, and the appropriateness of prediction. They concluded that children have incomplete or limited frames for attacking graphs.

Susan Jo Russell reported on a project in the USA involving developing statistical ideas. As with Dunkels' this presentation stressed the interrelationship between graphical ideas and other components of the mathematics curriculum. The presentation emphasised the importance of discussing, talking about, etc. statistical ideas. The presentation was supported with examples of childrens' work. Again, it provides evidence of what can be accomplished through statistical education.

Isolde Kinski provided a rationale for why probability should play an important role in the curriculum. Kinski further presented data on a developmental programme that is being utilised in Germany.

These summaries indicate the diverse nature of the papers. All illustrate important aspects of the teaching of statistics and should provide a basis for future research and discussion on the role of statistics at the primary level.