

PRINCIPLES OF LEARNING PROBABILITY AND STATISTICS

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Our first session began with Ramesh Kapadia exploring the nature, philosophy, and pedagogy of probability which provided us with a theoretical framework for our whole program. Any risk of this session becoming dominated by abstractions was quickly dispelled as Hans Schupp spoke about teaching stochastics to the middle years (grades 5-10), which is where the seeds must be sown. The first session concluded with Joan Garfield and Andrew Ahlgren reporting in an entertaining and illuminating way on their review of research and their efforts to undertake a major research programme with college students. It is hoped that their funding requirements can be met!

The second session began with Thomas Piazza perhaps upsetting the more conservative by advocating the teaching of statistics through data analysis (on-the-job learning one could call it). The iron curtain was rolled back as we welcomed Jordan Stoyanov from Bulgaria. He has over the past 15 years amassed a collection of more than 500 instances of the use of counter-examples for teaching purposes. He promised not to reveal them all, however! I closed this session by reporting on my recent research on the understanding of randomness involving 1600 English children aged 7-11 years. Maybe you will be interested to follow up this work in your own country – it would be a nice collaborative venture.

The last session had just two papers. First Ruma Falk reported on students' difficulties with conditional probabilities and then, with a related theme, Manfred Borovcnik introduced us to the important intuition of revising probabilities according to new information, which neatly brought together theory (or theories!) and practical (psychological) issues so typical of work in this area.

Although it may be possible to teach statistical rules, statistical education is primarily concerned with the far more difficult task of inculcating the ability to make judgements about selection and interpretation. I believe that no area of education makes greater demands on both teacher and learner.