

# Statistics in school

Rosemary Callingham  
University of New England

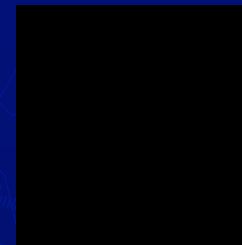
## History

- ▶ Became a recognised strand of mathematics as “Chance and Data” in 1990 following the National Statement
- ▶ Not included as a separate strand in NSW until 2002
- ▶ Moves to increase the amount of statistics in Year 11/12 courses

## Issues in teaching

- ▶ Developmental approaches to teaching
  - What children do as they are learning statistics may not resemble statistics as recognised by statisticians
  - School curriculum documents generally not well matched to the research base
- ▶ Students entering statistics may not be well prepared by primary and secondary syllabuses
  - Procedural approach e.g., drawing graphs
  - No Australian curriculum explicitly addresses underpinning concepts such as variation, sampling, etc

## Research initiatives



- ▶ 3 year ARC Linkage project (2006-2010)
- ▶ Industry partners:
  - ABS
  - Key Curriculum Press
  - Prince Alfred College
- ▶ 3 states (VIC, TAS, SA)
- ▶ 16 schools
- ▶ 50 teachers

## Aims

- ▶ Track changes in teachers AND their students over time
- ▶ Consider the effects of using :
  - state-of-the-art software
    - ▶ Tinkerplots and Fathom
  - real data
    - ▶ CensusAtSchool
  - Research based approaches to teaching statistics

## Tensions and emerging issues

- ▶ Links between statistics and mathematics
  - Categorical vs measurement data (continuous data)
- ▶ Cross curriculum issues
  - HSIE, PDHPE, Science
- ▶ Informed citizen vs needs of statisticians