



IASE Roundtable Conference 2020

New Skills in the Changing World of Statistics Education

6-12 July 2020, Virtual Conference

Topic 6



Collaboration with other disciplines to enhance students'
statistical understanding

Discussant: Stephanie Budgett, New Zealand

Chair: Pip Arnold, New Zealand

Papers

- ❖ Mixture DOE on Video Game Physics
Mason Chen, Stanford University, USA
- ❖ Pre-service teachers' experiences of integrating statistical investigations in their curriculum areas
Sashi Sharma, The University of Waikato, New Zealand
- ❖ The project method as a motivator in non-statistical careers
Teresita Terán, Universidad Nacional de Rosario, Argentina

Brief summary

- ❖ Mason described a video game approach designed to enable students to make connections between physics and statistics
- ❖ Sashi described how pre-service teachers of PE, social sciences, and English taught two sessions incorporating the statistical investigations in their classrooms with 11 to 13 year old students
- ❖ Teresita described an exploratory study where undergraduate veterinary students completed a project as part of their final assessment

Common themes across the papers

- ❖ Student motivation - enhanced when there is a purpose to their investigation
- ❖ Dealing with data - secondary data, collecting data
- ❖ The challenge of posing good statistical investigative questions

Discussions within the session

- ❖ Workload implications for instructors (project work)
- ❖ Grouping students for projects, particularly for diverse classrooms
- ❖ Helping students make connections between statistics and other disciplines
 - Being aware of the similarities and differences
- ❖ How does PPDAC relate to the scientific method?
- ❖ Statistical inference versus scientific inference

Thank you

- ❖ To the authors/speakers in the session, and to all the participants who contributed to the stimulating discussions