SSC 2019

International Data Science in Schools Project

Alison Gibbs, University of Toronto
Wesley Burr, Trent University
Rob Gould, UCLA

Today

- IDSSP: International Data Science in Schools project
  - What? Who? What? (me) What Now? (you)
- Materials for IDSSP (Wesley)
- Experiences working with school teachers and students (Rob)
- What Now? and What's Next? (you)

What? Goals

1 For all school children:

Understand and appreciate the use of data to

- make informed judgments in their daily lives
- make decisions in their professional activities

2 For some school children:

Instil interest and enthusiasm to

- pursue post-secondary studies in Data Science
- make a career in Data Science

Who? Audience

Students

- Last 2 years of secondary school
- No requirements for previous study in
  - calculus
  - computer science
  - statistics

Teachers

- Who?
- Anyone from a discipline that uses data

Who? Leaders

Nick Fisher, Australia

Chris Wild, New Zealand

Who else? Project development

Curriculum Team

- Statisticians
- Computer Scientists

Advisory Group

- Statisticians
- Computer Scientists
- Educators
- Curriculum experts
- Leaders of professional societies

Who else?

Countries with participants on the Curriculum Team

Who else? Supporting organizations

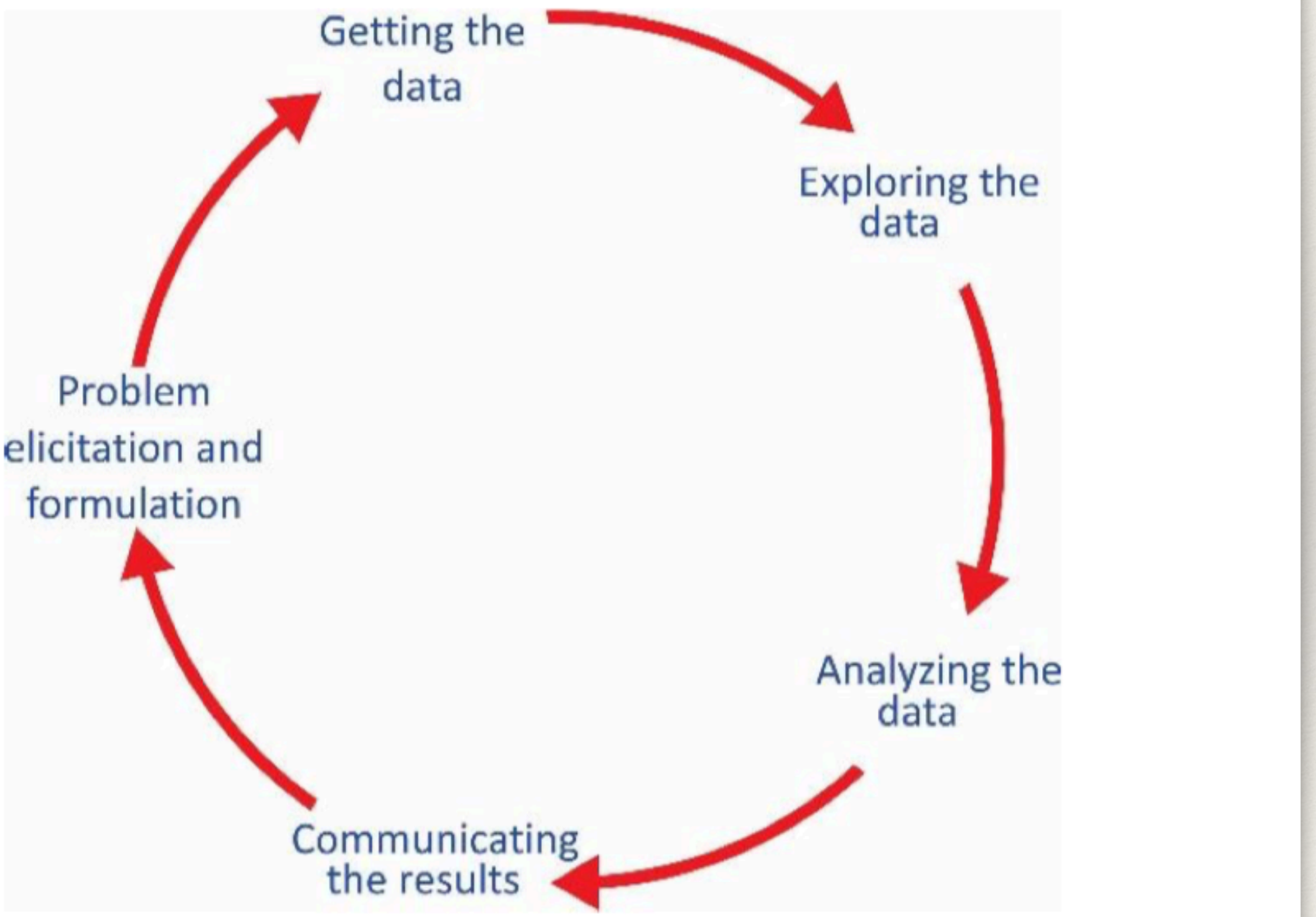
- American Statistical Association
- Association for Computing Machinery
- Australian Council of Deans of Information and Communications Technology
- ACEMS (Australian Research Council Centre of Excellence for Mathematical and Statistical Frontiers)
- BCS, The Chartered Institute for IT
- Cambridge Mathematics
- The Dutch Society for Statistics and Operations Research
- Google
- International Statistical Institute
- The Leiden Centre of Data Science, Mathematical Institute, Leiden University
- National Institute for Statistical Sciences (NISS; United States)
- New Zealand Statistical Association
- Royal Statistical Society
- Statistical Society of Australia
- Statistical Society of Canada
- Teaching Statistics Trust (UK)

What? Outcomes of Phase 1

- Curriculum framework for two courses for senior secondary school students

1. First course:
    - Awareness of data in students' daily lives
    - How to make arguments with data
    - How to critically assess arguments made with data
2. Second course:
    - Modules to choose from covering a wide variety of data types and reasoning with data

What? The cycle of learning from data



What? Outcomes of Phase 1

- Curriculum framework for teachers

  "Teaching the teachers"

  Model the student curriculum

  + extensions

  + depth

  + pedagogical considerations

What? Computing

- Goal: Appreciate and experience the importance of automating Data Science tasks
- Stealth coding

What Now? Consultation

http://www.idssp.org/pages/consultation.html

The draft curriculum frameworks developed under this project are now available for download! The document set comprises:

1. Introductory material and the frameworks for Unit 1 and Unit 2. Download here.
2. A tree-structured summary of the content of Unit 1 and Unit 2. Download here.

The IDSSP curriculum team welcomes feedback (by May 31, 2019): if interested, you can do so here

---

Updated 1 May, 2019, Wesley Burr.

What's Next? How can the project have an impact?

Options for Phase 2:

1. We're finished
2. Volunteers work on teaching resources
3. Funded resource development project