First /L+/ International Summer/Winter School on Language Acquisition

Practical session: R and R Studio

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Language and literacy development

Typical development

- Phonology
- Executive functions, learning and memory

Atypical development

- Down syndrome
- Children who are deaf
- Developmental dyslexia
- Developmental language disorder

Topics

- Why R?
- Getting started?
- A brief overview of R Studio
- Reading in data
- A bit of data manipulation
- Visualising data
- Some simple stats
- Using RMarkdown for writing up reports

How?

- Before the practical session
  - Why R?
  - Getting started?
  - A brief overview of R Studio

- During the practical session
  - Reading in data
  - A bit of data manipulation
  - Visualising data
  - Some simple stats
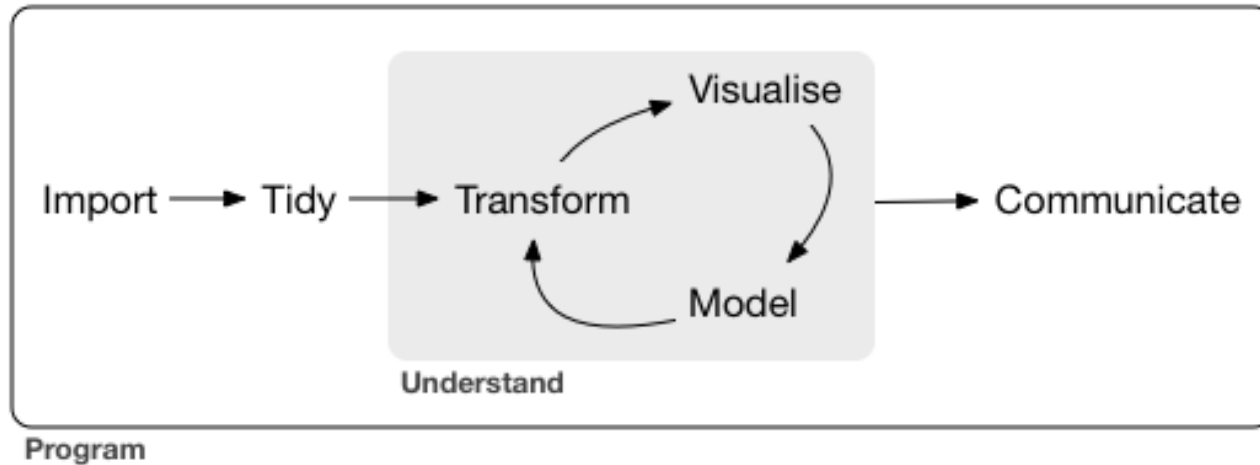 - Using RMarkdown for writing up reports

Why R?

- R is free, open source and runs across multiple platforms.

- R allows making 'data wrangling' an integral part of statistical analysis.

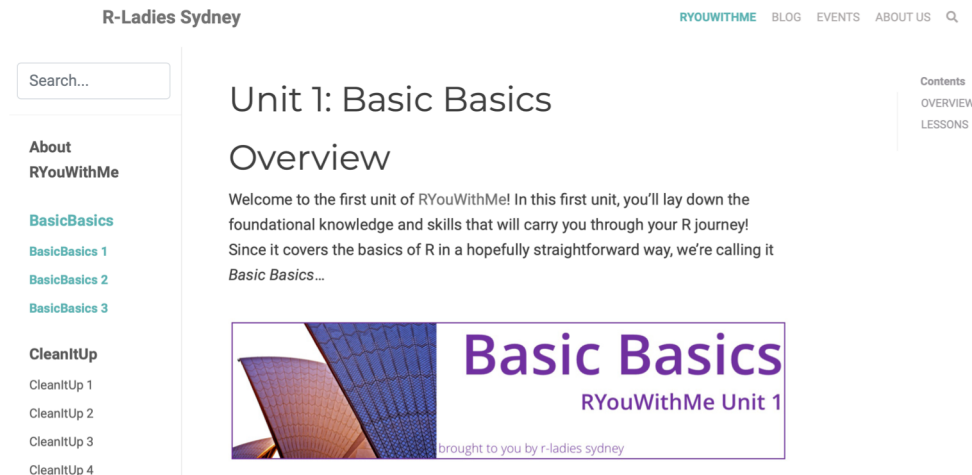- R is conducive to open and reproducible research practices.

https://www.r-project.org

Workflow and R

Import → Tidy → Transform

Visualise ⟳ Model

Understand

Communicate

Program

Why R Studio?

- It makes using R a lot easier!
- RStudio is free, open source and runs across multiple platforms.

https://www.rstudio.com/products/rstudio/

Before the practical session

- Why R?
- Getting started?
- A brief overview of R Studio

https://rladiessydney.org/courses/ryouwithme/01-basicbasics-0/

During the practical session

- – Reading in data
- – A bit of data manipulation
- – Visualising data
- – Some simple stats
- – Using RMarkdown for writing up reports

Wordbank
An open database of children's vocabulary development

http://wordbank.stanford.edu

https://wordbank-book.stanford.edu/index.html

Questions?

- Finding help.
  - Within RStudio
  - Google (!)

I google for #rstats code all the time!

Freya Rowland @freshwaterfreya
I find it enormously comforting that several people with mad #rstats skills have mentioned they often Google for code. #sohappyitsnotjustme

1:45 PM · Jul 26, 2016

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- Online resources.
  - Cheat sheets (https://rstudio.cloud/learn/cheat-sheets)
  - See next slide for an overview
- Ask questions during the practical sessions.

Resources – Where to start

- Introductions
  - RYouWithMe (Rladies – Sydney)
  - R for Reproducible Scientific Analysis (Software Carpentry)
- More on basics of working with data in R
  - R Studio Primers
- More advanced
  - R for Data Science (Hadley Wickam & Garrett Grolemund)
- Basic stats
  - Teacups, giraffes and statistics (Hasse Walum & Desirée de Leon)
  - PsyTeachR (Glasgow University)
- More comprehensive stats
  - Winter, B. (2020). Statistics for Linguists: An Introduction Using R.

To do now:

Go to the Rladies – Sydney 'RYouWithMe' website and complete the following units:

1. BasicBasics 1: Installing R and Rstudio + tour of Rstudio (20 minutes)
2. BasicBasics 2: Packages (15 minutes)
3. BasicBasics 3: Getting data into Rstudio (20 minutes)

4. CleanItUp 1: A start with data manipulation (30 minutes)

https://rladiessydney.org/courses/ryouwithme/01-basicbasics-0/