

Online Experiments for Language Scientists

Lecture 1: Introduction

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Reminder of rules for in-person classes

Guiding principle: **let's look out for each other**

- If you are unwell, or think you might be, don't come to class!
- We encourage you to wear a mask, particularly when it won't interfere with communication
- If you can't be here you can participate remotely via Learn or Teams

- If someone's here, trust that they're safe
- If someone's not wearing a mask, trust that they have reasons
- It's normal to cough sometimes!

What is this course about?

Language is something that humans do, so all subfields of linguistics involve collecting data from humans

- Grammaticality judgments, naturalistic recordings, sociolinguistic interviews, preferential looking/listening in infants, reading times, reaction times and/or choices in psycholinguistic experiments, ...

This kind of data can be collected in person

Or it can be collected online (i.e. via a web browser)

This course shows you how to build language-relevant experiments that run in browsers, and how to crowdsource experiment participants

Who teaches on it?



Kenny Smith

Prof

Lectures

Labs

Course
organiser



Alisdair Tullo

*Programming and
Apps Manager*

Labs



Maisy Hallam

*PhD student,
Linguistics*

Labs



Aislinn Keogh

*PhD student,
Linguistics*

Labs



Vilde Reksnes

*PhD student,
Linguistics*

Labs

How is it delivered?

Lectures (Mondays 9am-9.50am)

Labs (Wednesdays 9am-10.50am)

Lectures

- In person, but with a live-streaming option
- Each lecture has associated pre-reading, **do the readings before the lectures** so we can discuss any questions/thoughts you have
- Bit of context by me, **plus discussion / Q&A time**

Labs

- In person, but with a remote participation option via Teams (limited numbers only!)
- Work through the practicals, with support on hand!

How is it assessed?

Assessment 1: annotated bibliography, worth 30%, due 10th November

- Brief summary plus evaluation of 4 papers
- Papers can come from course readings or elsewhere

Assessment 2: coding project + report, worth 70%, due 8th December

- A functioning web experiment
- A short report explaining the motivation for that experiment, discussing and evaluating critical implementation decisions

Lots of information re. rationale and expectations available in the assignment brief

There will be a cut-off date for questions on the assignments!

Where can I find all this information?

Course Learn page

- Links to course pages on github
- Lecture live streams/recordings
- Access code to set up Teams remote labs (if you need it)
- Assignment submission links

Course pages on github

- Everything else

Any questions on course organization, admin?

(Kenny, remember to check online Q&A)

Three components of running an online experiment

Building an experiment that will run in a web browser

- We'll be using javascript and jsPsych
- Also useful for running experiments in-person!

Making it openly available online

- PPLS / the Uni provide servers

Connecting with experiment participants

- E.g. through **crowdsourcing websites**

A look at some simple experiments

Javascript and jsPsych

Javascript: a programming language that runs in web browsers

jsPsych: a library that makes it easy to build experiments

(<https://www.jspsych.org>)

de Leeuw, J. R. (2015). jsPsych: A JavaScript library for creating behavioral experiments in a web browser. *Behavior Research Methods*, 47, 1-12. doi:10.3758/s13428-014-0458-y.



Josh de Leeuw
Vassar College



Plugins and timelines

Plugins: basic building blocks

```
var hello_trial = {  
  type: jsPsychHtmlKeyboardResponse,  
  stimulus: 'Hello world!'  
}
```

Timeline: a sequence of those building blocks

```
jsPsych.run([hello_trial]);
```

A wide range of plugins available

See <https://www.jspsych.org/7.3/plugins/list-of-plugins/>

Building an experiment involves

- Knowing how to use plugins
- Figuring out how to piece them together to make the experiment you want
- Some tiny bits of html and javascript to connect the plugins and make them do what you want
- (Occasionally, and optionally, making your own plugin)

A quick word about coding
and realistic expectations!



Any questions/concerns so far?

(Kenny, remember to check online Q&A)

Next up

Now: first (truncated) lab!

- Week 1 practical, linked from the github page

Next Monday, 9am: lecture 2, crowdsourcing experimental data

- Our normal lecture room (S1, 7 George Square)
- **Do the reading beforehand!**