# Lecture 5

Informatics

# Aims

- To practise efficient reading: identifying aims and evidence in journal articles.

- To practise reading and responding critically to argument.

- Q and A session

# Work in fours

Search for two articles by Bjoern Franke ( and colleagues).

- https://blog.inf.ed.ac.uk/bfranke/publications/

- http://www.icsa.informatics.ed.ac.uk/compilers/publications.php

Divide into pairs, and decide which pair will read which article.

Read your article. You have 7 minutes to identify the aims and evidence offered for the conclusions reached.

- **Both of you should now tell the other two WHAT the article was about, and then take a stance.**

- **Was it a 'good' article'- why/ why not?**

- **Is the importance of the issue established?**

- **Do the aims match the conclusions?**

- **Look at the Methods Section: are the sample/ procedure/ materials used all effective?**

# Now, choose one of your articles

Use the following questions to make sure you have responded critically to the article.

- Does the writing assume a causal connection when there may not be one?
- Are general conclusions drawn based on only a few examples?
- Are inappropriate comparisons being made?
- Might there be other explanations apart from the one proposed?
- Are there any hidden assumptions that need to be questioned?
- Is enough evidence presented to allow readers to draw their own conclusions?

- Does the line of reasoning make sense?
- Are you convinced by the interpretations presented?
- Are the conclusions supported firmly by the preceding argument?
- How appropriate are the comparisons that are used?
- Did the response options, or measurement categories or techniques used affect the data that were collected?
- Have any ethical considerations been adequately addressed?

# Good advice from the Leicester University

- *The aim of critical reading is not to find fault, but to assess the strength of the evidence and the argument. It is just as useful to conclude that a study, or an article, presents very strong evidence and a well-reasoned argument, as it is to identify the studies or articles that are weak.*

# An aside:

- Do not introduce a source by using expressions like,

- *The eminent professor / the fabulous Dr Franke.*

- Do not write John Smith or Dr Kerr Thomas; Just Smith et al. ( 2019)
- **Or SYNTHESISE INFO** (Franke, 2015; Jones et al., 2020; Smith, 2018;).

# An example of synthesising texts AND being critical

- Previous surveys that discuss instruction selection to one degree or another have been
- conducted by Cattell [45], Ganapathi et al. [116], Leupers [169], and Boulytchev and Lomov
- [33]. However, the last extensive survey – that of Ganapathi et al. – was published more than 30
- years ago. Moreover, the classic compiler textbooks only briefly discuss instruction selection
- and thus provide little insight; in the combined body of over 4,600 pages that constitute
- the compiler textbooks [8, 15, 59, 96, 173, 190, 262], less than 160 pages – of which there
- is tremendous overlap and basically only discuss tree covering – are devoted to instruction
- selection. Hence there is a need for a new and up-to-date study of this field. This report
- addresses that need by describing and reviewing the existing methods – both dated as well as
- the state-of-the-art – of instruction selection, and thereby supersedes and extends the previous
- surveys.

# If you have already written about this article

- Show your partner.

- Do they understand from your writing the main argument of the article?

- Are they satisfied that you have responded critically to the argument made?

- Do they understand WHY you chose that article?

If you haven't done any writing yet,

- **WRITE a couple of sentences NOW!**

Is your partner happy that you are being critical ?

# Academic reading and writing

# Q & A