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