Thinking critically about your results
What is critical thinking?

- See
- https://www.youtube.com/watch?v=YVLjziA5U2o
Argument

- What is the key point or message the writer/speaker is trying to communicate?
Techniques used to create an argument

Identify a position or point of view
• **What** do they want you to believe?

Give reasons to support the position
• **Why** do they think that?

Give evidence to support reasons
• **How** do they know?
Good argument

- **Clear**
  - author’s position clear

- **Logical structure**
  - similar points are grouped together

- **Relevant**
  - all content relevant

- **Comprehensive**
  - considers all key reasons

- **Even-handed**
  - opposing views treated fairly

- **In depth**
  - reasons thoroughly considered
Poor argument

**Unclear or limited**
- Jumbled order
- Surface consideration of issues

**False premises**
- Based on incorrect assumptions

**Flawed reasoning**
- Assumed cause and effect when two events coincide
- Comparisons that aren’t valid

**Bias or vested interest**
- Emotive language
- Personal attacks

**Misrepresentation**
- Ignoring main opposing reasons
Questioning

- Why should I believe this?
- Does this claim need evidence to support it?
- What evidence would someone need to provide for me to think that this is probable/dependable?
Looking for the evidence

- Statistics
- Case histories/studies
- Examples
- Findings from experiments
- Data from surveys
- Questionnaires
Check List

Dates
- Is the data still relevant?

Sources
- What is the source of the evidence?
- Publishing process

Bias
- Possible author bias?
- Language
- Extreme cases cited

Statistics
- Support conclusions?
- Methodology?
Statistics

- Percentages
- Sample size
- Representative
- How data was collected
- Are you required to use a particular critical appraisal model?

- Overall, do the findings support the conclusions?
Exercise

- Choose an article that you found from last session

- Look at the criteria on the sheet and assess the article along the guidelines
Critical reading model

**Argument:**
- What is the main argument?
- Is the main argument clear and logical?

**Evidence:**
- What is the evidence?
- Is the evidence valid?
- Does the evidence support the conclusions?
Critical thinking: summary
4 steps to finding literature

1. Identify keywords
2. Decide where to search
3. Search
4. Review results