

1 Critically interpret numbers (quantitative data)

Key message:

Numbers look objective, but this conceals a great deal of subjectivity.

With qualitative data (text), it's obvious that the researcher is doing a great deal of interpretation. E.g. the researcher selects quotes.

- Selectiveness is necessary
- **Cherry picking** is bad

Researchers cherry pick so they can fit the data to their argument, instead of fitting their argument to the data.

Cherry picking quotes

- West End (London)
remake of Guys
and Dolls
- The poster said:
“HILARIOUS”

What the reviewer
actually wrote: "Frank
Loesser's great musical
from 1950 is hilarious ...
[But the modern]
production often falls
somewhat flat."



Critically interpret numbers

With quantitative data, interpretation is less obvious

- We often take numbers at face value
- Numbers seem objective
- That reduces our willingness to question/critically interpret them
- Why 8 glasses of water a day?

Accidentally bad stats

What's the worst statistic ever? Sociologist Joel Best claims it's one he saw in 1995 in a paper by a graduate student he was supervising. 'Every year since 1950,' the student wrote, 'the number of American children gunned down has doubled.'

Yes, America is a dangerous place. But has the number of children gunned down really doubled every year since 1950? Could it have? The answer is no, as a quick bit of back of the envelope arithmetic shows. Even if only one child had been shot in America in 1950, doubling that number would give you two in 1951, four in 1952, and so on up to 1024 in 1960. If you keep doubling the number every year, by 1970 you would hit one million and by 1980 one billion. In 1987 you would surpass the best estimates for the total number of humans who have ever existed (110 billion), and by 1995 you would hit 35 trillion. Talk about a violent country.

What's interesting is that this wasn't just a graduate student's error: he had quoted the statistic from a professional journal. In other words a professional writer had produced this statistic, editors had signed off on it, proofreaders had approved it, and it now had an existence as journalistic fact, despite being clearly impossible.

Purposefully bad stats?

Daily Mail headline: “Town hall bans staff from using Facebook after they each waste 572 hours in ONE month”

- (24 hours in a day) x (31 days in a month) = 744 hours
- **19 hours per day, seven days** a week at the office, all of it on Facebook
- 572 hours was for the *entire* council workforce: 4,500 employees.
- Average use of Facebook: **7 minutes per month, or 14 seconds a day.**

Critically interpret what you read

Practical tips for reading research articles

- Everyone has different ways of reading, and that's okay
- Always read the abstract before beginning: it sums up the article's key points for you.
- The key with academic articles is that you read *actively* – otherwise it's too easy to get swamped by the jargon, theories, turgid writing, etc

The key to active reading: write a little bit about what you read

- A couple of quickly jotted notes are worth 100 highlighter pens
- Makes it easier to remember in future, e.g. when you come back to the article next month
- Stimulates your own thinking – critical engagement rather than passive reception

Strategies for reading research articles

Read critically (actively), not passively

While you read, try to answer questions:

- 1. What is the author's key argument(s)?**
- 2. How is that argument supported?** What research did the author conduct? E.g. qualitative interviews? With whom?
- 3. What are the key tensions or conflicts in this article?** (E.g. trainers' desire for more Professional Development, and colleges' lack of support for this)
- 4. Are there any discourses, values or ideologies underlying the argument?**
- 5. What theories does the author draw on?**
- 6. What research does the author use to challenge her own argument? Is the author being fair – i.e. she being as rigorous with her own supporting evidence as she demands that her "opponents" be with theirs?**

Write what? Where? How?

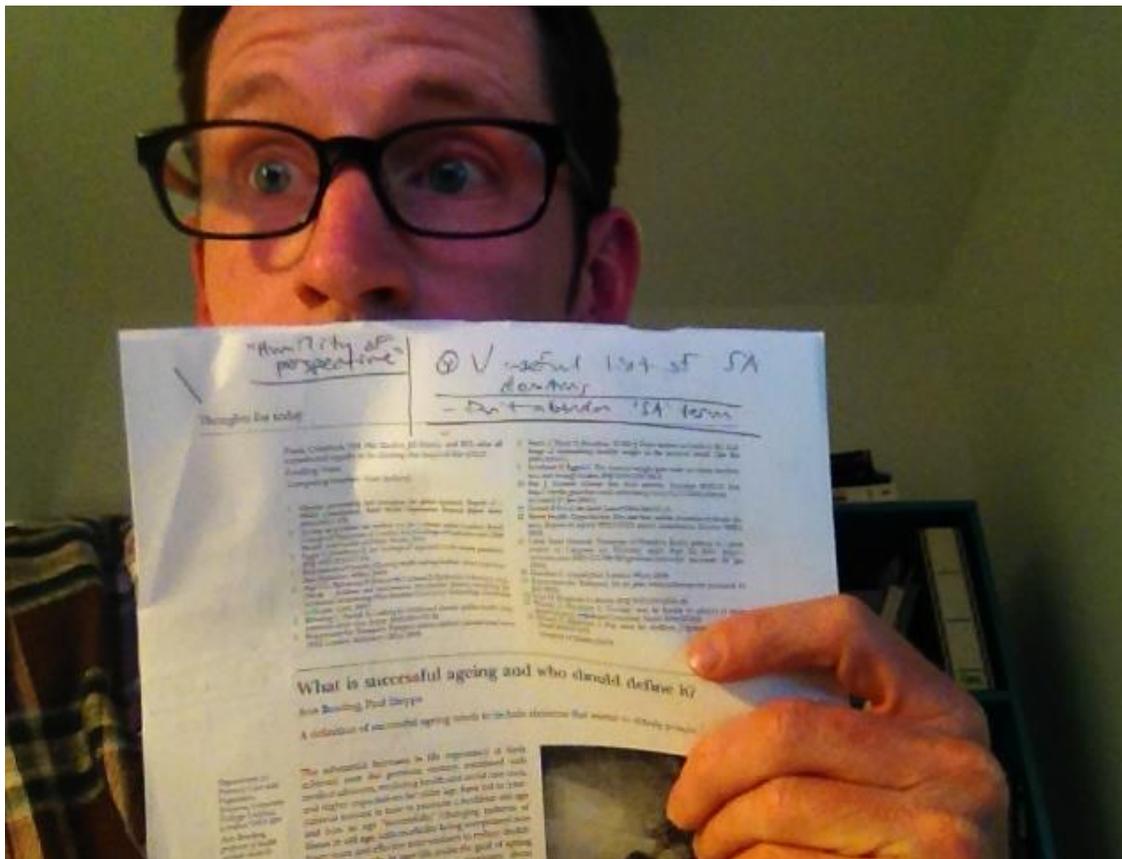
- Critical reading wheel or article grid

	(Osborne, Marks and Turner, 2004)
What they do	Examine and illuminate the decision making processes of potential and current mature entrants to HE.
Summary of PL	Factors that impinge on potential student's decision to apply to HE from previous lit: National policies related to recruitment e.g. WP, <u>finance</u> ; Economic and Labour Market conditions (which may vary regionally); Policy and practice of individual HE and FE institutions; personal backgrounds and circumstances of potential students.
Critique of PL	
Gap	Little is known about how potential mature students weigh up the personal advantages of studying and gaining qualification nor how they seek to overcome perceived barriers to being the transition process to become students.
Rationale	Context – decline in mature student entrance to HE in 1994-95 and 1998-99
Results	Although every individual is influenced by a unique set of factors when making the decision, certain types of factor weigh heavier with some sub-groups of mature students than others. Personal factors appear most important for the majority. They outline <u>procs</u> and cons of the decision making process – national policies, economic and job market; personal circumstances – some mention here of untapped potential at school.
Results consistent with lit	Green and Webb – wasted potential – had <u>quals</u> but chose to do something difference – In Osborne the delayed traditional fitted into this category.
Results contrary to lit	
<u>Conc</u> What they did	
Recs	WP policy has shifted to concerns of younger people in areas of socio-economic deprivation. Mature students not a priority for HEIs and governments and therefore may not out time and resources into improvements such as – <u>finance</u> , interface between benefits and study; better advice and guidance; inter-agency co-operations; job responsibilities largest barrier to mature students – employers can have a positive role in supporting development of employees (e.g. part time study). Incentives to institutions to create <u>greater flexibility in provision</u> .
METHODS	Telephone interviews

Write what? Where? How?

The old-fashioned way: pen on paper

- Front or back page of article, not just in margins



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