

# From “What” to “How”: Critical Thinking Workshop

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# The Robert Gillespie Academic Skills Centre (RGASC)

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# From “what” to “how”

- Information is **what** a source is saying
- Information is facts, and facts are important
- We need to know facts; they are the basis for our actions
- However, the facts **alone** are not meaningful; rather, they acquire meaning when used in a context
- The context gives the meaning, and so we need to always ask **how** a source uses the facts it presents

# Fact

Frequent consumption of chocolate gives pleasure but has been shown to be linked to an increased chance of becoming obese.

# Example 1: Expanding “what” to “how”

One of the great scourges of modern North American society is obesity, which costs Canada almost \$50 billion annually in increased medical costs and lessened productivity. Frequent consumption of chocolate, motivated purely by the desire for personal pleasure, has been shown to be linked to an increased chance of becoming obese. **For this reason,** removing chocolate from our diets is not just a personal responsibility; rather, it benefits the community as a whole.

## Example 2: Expanding “what” to “how”

Research has shown that being happy is good for business and good for our health. Occasionally eating chocolate is a relatively low-cost, low-impact way of making people happy, and while it is true that frequent consumption of chocolate has been shown to be linked to an increased chance of becoming obese, the health and business benefits of happiness far outweigh the potential costs of this slightly heightened risk of obesity.

# Critical Reading: Moving from what the content says to what it does

- Every part of a piece of writing has content: it is **saying** something
- Reading at a pre-critical level involves understanding what something is saying
- But the content doesn't get into the article randomly: authors choose and present their points to support their arguments
- That means that the content is also **doing** something in terms of developing the author's article
- Understanding what information is **doing** is the basic critical reading skill

# How Sex Affects Intelligence

- The following examples come from the article “How Sex Affects Intelligence”

<https://www.theatlantic.com/health/archive/2014/01/how-sex-affects-intelligence-and-vice-versa/282889/>



How does the second paragraph continue the discussion from the first?

What does it add or develop?

Forget mindfulness meditation, computerized working-memory training, and learning a musical instrument; all methods recently shown by scientists to increase intelligence. There could be an easier answer. It turns out that sex might actually make you smarter.

Researchers in Maryland and South Korea recently found that sexual activity in mice and rats improves mental performance and increases neurogenesis (the production of new neurons) in the hippocampus, where long-term memories are formed.

How does the third paragraph relate to the second?

Researchers in Maryland and South Korea recently found that sexual activity in mice and rats improves mental performance and increases neurogenesis (the production of new neurons) in the hippocampus, where long-term memories are formed.

In April, a team from the University of Maryland reported that middle-aged rats permitted to engage in sex showed signs of improved cognitive function and hippocampal function. In November, a group from Konkuk University in Seoul concluded that sexual activity counteracts the memory-robbing effects of chronic stress in mice. “Sexual interaction could be helpful,” they wrote, “for buffering adult hippocampal neurogenesis and recognition memory function against the suppressive actions of chronic stress.”

# Are the Claims Legitimate?

## **Last sentence of the first paragraph:**

“It turns out that sex might actually make you smarter.”

## **Last sentence of the third paragraph:**

““Sexual interaction could be helpful,” they wrote, “for buffering adult hippocampal neurogenesis and recognition memory function against the suppressive actions of chronic stress.””

- Is the first paragraph’s conclusion legitimate?
- How have the scientists limited their claim?
- How has the article author limited her claim?