

# Countering Cognitive Bias

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## 1. Reading on thinking, cognitive bias, and debiasing

### Books

1. Thinking, Fast and Slow (Kahneman)
2. Predictably Irrational (Ariely)
3. Nudge (Thaler and Sunstein)
4. The Enigma of Reason (Mercier and Sperber)
6. Superforecasting (Tetlock and Gardner)
7. Factfulness (Rosling)
8. Being Wrong (Shultz)
9. Rethink (Grant)

### Articles

1. Critical Thinking Education and Debiasing (2014) - Kenyon
2. The Scope of Debiasing in the Classroom (2016) - Beaulac & Kenyon
3. Argumentation Schema and the Myside Bias in Written Argumentation (2009) - Wolfe, Britt & Butler
4. Come Now, Let Us Reason Together: Cognitive Bias, Individualism, and Interactionism in Critical Thinking Education (2020) - Dacey
5. Critical Thinking and Cognitive Bias (2015) - Maynes
6. Strategies for Teaching Students to Think Critically: A Meta Analysis (2014) - Abrami et al.
7. Adaptive Rationality: An Evolutionary Perspective on Cognitive Bias (2009) - Haselton et al.
8. GI Joe Phenomena: Understanding the Limits of Metacognitive Awareness on Debiasing (2021) - Kristal & Santos

### Red Teams Podcast

<https://www.stitcher.com/show/red-team-podcast>

## 2. Summary

### Summary 1 – Cognitive Bias

1. Cognitive Biases, tendencies or predispositions in thinking are an integral part of the design of our mind and filter thinking with both positive and negative outcomes
2. Cognitive Biases are more or less hardwired – this raises problems in approaches trying to spot and mitigate the negative effects as they emerge

### Summary 2 – Aiming at Cognitive Bias Mitigation in CT

Negative outcomes of bias families can be targeted – e.g. reduced OPM and reduced rethinking

1. Apply the handwashing approach – integrate some activities into your lessons that promote OPM and rethinking without worrying about whether or not the “Ostrich Effect” is emerging or not

2. Combine inside and outside interventions to magnify the impact of CT strategies on bias
3. Teach students to use these strategies themselves e.g. brainstorm individually first

### **3. Sample classroom tasks with OPM tasks integrated**

1. Sample task for beginner level students - discussing the “best” pet

Step 1 - brainstorming individually - avoid e.g. groupthink/halo effect

Step 2 - collect ideas and present anonymously via e.g. Google docs

Step 3 - create “red teams” whose job it is to ask for reasons for all pet ideas

Step 4 - rank top ten pets

Step 5 - stop the discussion and introduce some unusual pets for students to discuss

2. Higher levels - choosing an essay position for an argumentative essay

Step 1 - have students individually research sides of an issue - avoid e.g. myside bias/halo effect

Step 2 - collect pros & cons, present them anonymously via e.g. Google docs

Step 3 - create “red teams” to challenge the pros & cons

Step 4 - Require students to underline or re-read arguments they do not agree with

Step 5 - students review the class notes and decide their individual essay position

### **4. Sample Classroom Tasks for better rethinking - combining inside and outside**

Sample Combination 1

Individual CT strategy - “Sleep on it!”

→ Likely to have a positive effect on mitigating many biases

Plus combined outside intervention – group discussion or sharing

(especially if you can manage to mix up viewpoints)

→ Improved rethinking and better chance to mitigate bias

Sample Combination 2

Individual strategy – Write down a thinking process

→ Likely to have some positive effect on mitigating many biases

Combined outside intervention – use a teacher prepared thinking checklist, “Have I applied different types of evidence?”, “Have I considered counterarguments?”

→ Improved rethinking and better chance to mitigate various biases

### **5. Implications for future CT**

1. For greater effectiveness, CT will move more and more towards the psychological perspective and the need to incorporate an understanding of the basic underlying mechanisms (including cognitive bias) of the mind

## 2. Future CT models and frameworks

