

Review of: "Strategies for Reducing Inherent Cognitive Biases in Educational Classrooms"

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I believe this author is exploring an issue that claims to be under-researched. Taken the author's word for it, this would be as welcome addition to education science. As a Professor of Education (as well as instructor for NATO in cognitive bias and critical thinking), cognitive bias has long been a central component of courses, as well as analysis of graduate student research.

However, this author tries to do too much, encompassing "educational research, pedagogy, and andragogy," and so is unable to address the complexities of the subject. In fact, the study suffers from the bias of oversimplification, a common heuristic "shortcut" that undercuts its potential applicability to educational settings. Besides, there is a *substantial* body of research on the impact of cognitive bias on education. I appreciate the connection between Table 3: High Risk Situations for Biased Reasoning and Table 4: High-Risk Situation in Education. The medical model seems *initially* illustrative.

My concerns lay in the following:

1. This desk research does not describe the components either of (1) educational research, (2) pedagogy, or (3) andragogy in enough detail to move the needle toward a new perspective based upon a synthesis of research.
2. There are assumptions wholly unsupported by citations or proof.
3. Statements such as "Cognitive biases are genetic, hardwired, pre-programmed, and inherent in every individual" "... cognitive biases, however, cannot be" unlearned... and "Remediation and debiasing strategies...must start with the acknowledgement that we are powerless to change our cognitive biases in individuals and the population" are opinions, rather than evidence-based postulations, and therefore easily contestable.
4. While educators might benefit from making the distinction between cultural and personal biases and cognitive/intercultural biases, this author does not, in fact, clarify terms. What is the difference between cultural bias and intercultural bias?
5. The author frames the discussion in terms of micro, meso, and macro contexts. While Tversky and Kahneman's work provides a construct worthy of note, biases are not so easily categorized. They are slippery, by nature, their identification made more complex by the interwoven nature of the individual and her social interactions.
6. Following, there are *several* frameworks for understanding the nature of cognitive bias. The Cognitive Bias Codex is mentioned in a footnote, but its structure does not comport to this hierarchy, but (in fact) categories that can more effectively be applied to educational settings: (1) What Should we Remember? (2) Too much Information (3) Need to Act Fast, and (4) Not Enough Meaning. The examples of cognitive biases (Table 2) list 10 such biases. The Codex

includes 180. Why these?

7. There are few, if any, examples of how cognitive bias manifests itself in (1) educational research, (2) pedagogy, or (3) andragogy and only addresses the identification of bias through comparisons by peers of the same classroom context
8. It is this reviewers opinion that the association with biases in the medical profession has limited utility. After a while, it gets confusing. I wonder if the author seeks to legitimize the application of cognitive bias identification and “remediation” for teachers by such an association. Education science, the study of how one learns and *what drives learning* has its own legitimacy capable of serving as apt illustration.

I believe the article needs significant revision to:

- Focus on one aspect of teaching practice
- Demonstrate the impact of cognitive bias in a specific context
- Substantiate any claims it makes (see #3, above)