

COGNITIVE BIAS AND THE DUNNING-KRUGER EFFECT

IOWA LAND TITLE ASSOCIATION
EDUCATION COMMITTEE
SEPTEMBER/OCTOBER 2023

COGNITIVE BIAS

COGNITIVE BIAS

What is it?

- It implies an unreasoned and unfair distortion of judgment in favor of or against a person or thing

Why do we all have it?

- An attempt by our brains to simplify all the information it receives every second
- A systematic error in our thinking that influences and affects how we make decisions and how we think about the world around us

There are more than 150 different cognitive biases now identified!

COGNITIVE BIAS EXAMPLES

- **CONFIRMATION BIAS**

Where a person tends to either automatically notice, or actively seek out information that confirms their own beliefs

- **FALSE CONSENSUS EFFECT**

Where people tend to overestimate how many people have the same beliefs or opinions, or agree with them

- **ANCHORING BIAS**

Where the first piece of information you encounter on a topic becomes the base of your thinking, regardless of new information available

- **SELF-SERVING BIAS**

Where one believes if something good happens, they believe it is because of the work or effort put in, but if there is a negative outcome, the failure is attributed to external forces

- **ACTOR-OBSERVER BIAS**

Where a person might make excuses for their own shortcomings, while judging others' similar shortcomings as being due to lack of effort or skill

COGNITIVE BIAS

Dunning-Kruger Effect

- David Dunning and Justin Kruger
- 1999 study “Unskilled and Unaware of it: How Difficulties in Recognizing One’s Own Incompetence Lead to Inflated Self-Assessments.”
- Claims that people tend to hold overly favorable views of their abilities.
- Suggested that this overestimation partly occurs because unskilled people suffer what they term a “dual burden.”
- People reach erroneous conclusions and make poor decisions, and their incompetence robs them of the ability to realize it.

DUNNING-KRUGER EFFECT

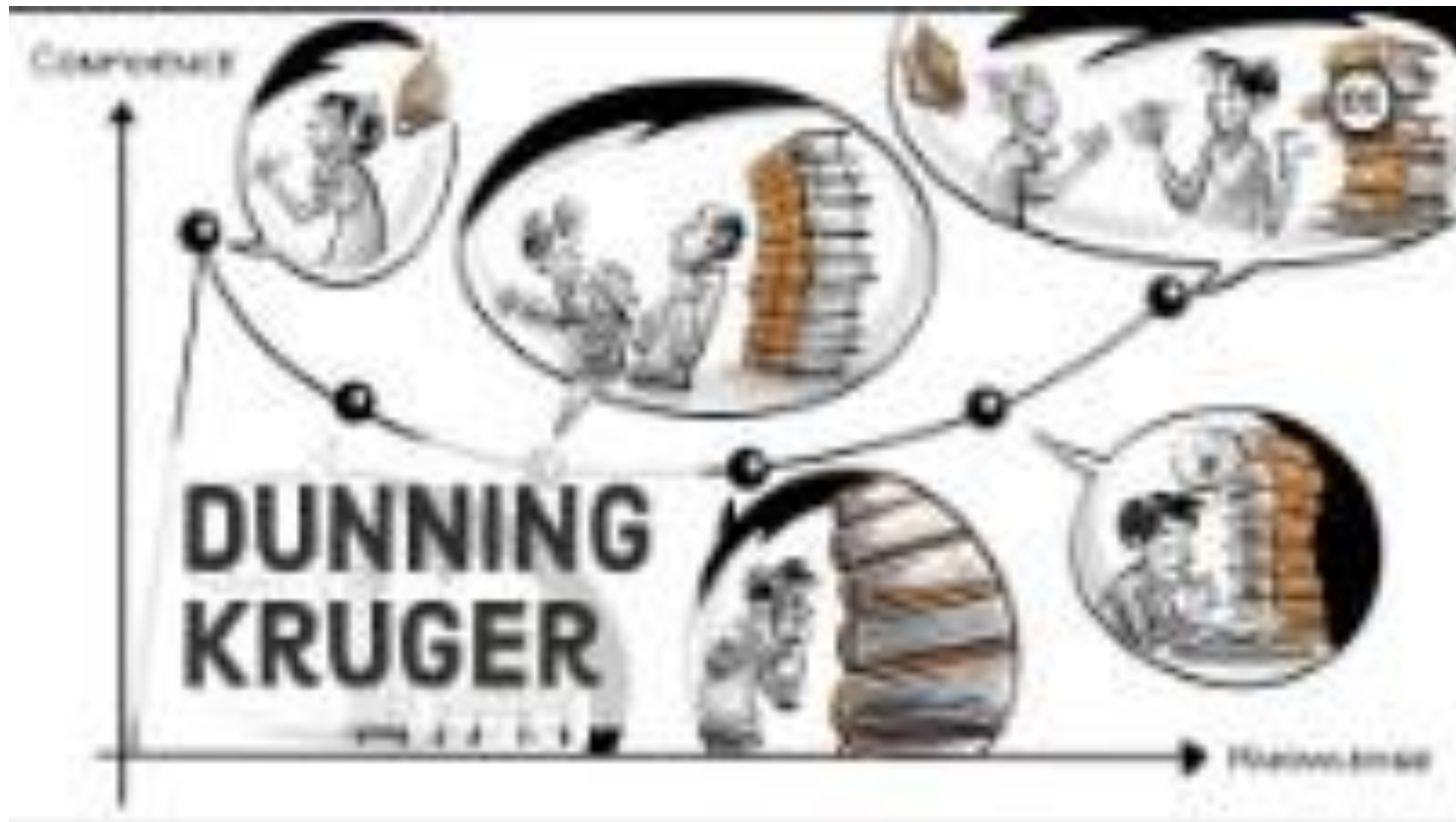
Across four studies, persons who scored in the bottom quartile severely overestimated their test scores and ability.

- Their scores were in the 12th percentile
- They estimated themselves to be in the 62nd percentile

Dunning and Kruger Conclusion

- Miscalibration was due to a lack of metacognitive skill -- the ability to distinguish accuracy from error
- Does not apply to intelligence in general and is NOT to be confused with an IQ score
- Applies to skills in specific tasks
- Speaks specifically to one's self-assessment of a particular skill or set of knowledge

DUNNING-KRUGER EFFECT



Questions?

DUNNING-KRUGER EFFECT

Dunning and Kruger used Mr. Wheeler's foiled bank robbery to make three points:

1) In many areas in life, success and satisfaction depend on knowledge, wisdom and savvy in knowing what strategy to pursue.

2) People widely differ in knowledge and strategies.

3) This is the controversial point. Incompetent people reach erroneous decisions, but their incompetence doesn't allow them to realize it.

THE DUNNING-KRUGER STUDY

DKE – THE STUDY

Dunning and Kruger made four predictions:

- 1) Incompetent individuals will dramatically overestimate their ability and performance.
- 2) Incompetent individuals will have deficient metacognitive skills. They are less able than competent persons in recognizing competence.
- 3) Incompetent individuals are less able to gain insight into their true ability by means of social comparison. This means that they have trouble recognizing competence in others and thus do not learn from it.
- 4) Incompetent individuals can gain insight about their ability, but paradoxically it is by increasing their competence in an area that allows them to realize their past poor performance.

STUDY 1: HUMOR

- 65 Cornell University undergraduates
- 30-item questionnaire - jokes of varying comedic value
- Participants asked to compare their ability to the average student
- On average, participants ranked themselves in the 66th percentile
- The focus was on those with scores in the bottom quartile
- Those in the bottom quartile scored themselves to be in the 58th percentile – scoring themselves as better than average
- Shows people tend to overestimate their abilities relative to their peers and those who performed the worst were unaware

STUDY 2: LOGIC

- 45 Cornell University undergraduates
- 20-item logical reasoning test: questions from a LSAT preparation guide
- In addition to being asked to compare how they would rank among the other participants, students were also asked to estimate how many questions they scored correctly
- On average students placed themselves at the 66th percentile rank among the test takers
- Participants in the bottom quartile scored at 12th percentile on average but believed they were at 68th percentile

STUDY 3: GRAMMAR – PHASE 1

- 84 Cornell University undergraduates
- 20-item grammar test: questions from a National Teacher Examination preparation guide
- Participants asked to estimate their percentile rank in comparison to other participants as well as estimate the number of overall test questions they answered correctly
- Participants scoring in the bottom quartile scored in the 10th percentile on average, but estimated their ability to be at 67th and their actual test score to be in the 61st, and thought they answered more questions correctly than they actually did
- Top quartile participants again underestimated their abilities

STUDY 3: GRAMMAR – PHASE 2

- 4 – 6 weeks after completion of phase 1, participants from top and bottom quartiles asked to grade other participant's tests, then re-rate their ability in comparison to their peers
- Tests reflected a range of performances from their peers, which was a fact shared with participants
- Afterwards, participants were shown their own test again and were asked to re-rate their ability and performance relative to other participants and also, again to re-estimate the number of test questions they thought they answered correctly
- The bottom quartile students failed to gain insight into their own ability even after reviewing competent students' correct answers

STUDY 3: PHASE 2 - *note about top performers*

- In phase 1, they again underestimated their abilities
- In phase 2, after grading five papers, they raised their estimates of their own general grammar ability and their percentile ranking
- Evidence of the “false-consensus effect”
 - **Top performers did not underestimate themselves due to being wrong about their own performance**
 - **They were wrong about the performance of their peers- they thought the lower scoring participants would actually do better**
- The miscalibration of the incompetent stems from an error about the self
- In contrast, the miscalibration of the competent comes from an error about others

STUDY 4: LOGICAL REASONING

- 140 Cornell University undergraduates
- 10-item logical reasoning test: questions based on the Wason selection task (it's a logic puzzle) and as before asked to rate their percentile and estimate the number of questions they answered correctly
- A random selection of half of the participants were given a short training packet giving techniques on logical reasoning
- The other half of the participants, were given an unrelated task
- After, all participants went through their own tests and indicated which problems they answered correctly, re-estimated the total number of problems they answered correctly, and compared themselves with their peers on test performance

STUDY 4: LOGICAL REASONING – PRETRAINING ASSESSMENTS

- Participants overall overestimated their logical reasoning at 64th percentile
- The bottom quartile were oblivious to their poor performance
Although being at the 13th percentile, they believed they were at 55th
- Top performers again underestimated their ability
Their scores were in the 90th percentile but they thought they were in the 76th percentile

STUDY 4: LOGICAL REASONING – POST-TRAINING ASSESSMENTS

- The ten minutes of training was very successful

Those originally in the bottom quartile were just as accurate in monitoring their test performance as those who initially scored in the top quartile

- Students in the bottom quartile who received training became more calibrated in every way
- No such increase was found for the bottom performers in the untrained group.

“He who knows best knows how little he knows.”

– Thomas Jefferson

REFUTATIONS

REFUTATIONS

- Not everyone agrees the DKE exists
- There are claims that the DKE is an effect of research design, not human thinking
- Researchers are trying to disprove DKE through new studies

Regardless....

- **Self-awareness of limitations and assets, along with a willingness to continue to learn, are key to success**

TAKE-AWAYS

What can we gain from learning about the Dunning-Kruger Effect?

- 1) We all have blind spots in evaluating our own performance and abilities
- 2) There is always more to learn about the subjects that interest us
- 3) Learning additional knowledge enables us to possess a more accurate understanding about our own abilities. We can improve ourselves through education

TAKE-AWAYS

As we move into the next section keep the following questions in mind:

- How can we as title professionals expand our subject knowledge and perform at a higher level?
- What training or educational resources are available in our field?
- How can we help our peers in the title industry improve their skills?

BREAKOUT SESSION

BREAKOUT SESSION

- An inexperienced employee might _____.
- If someone overestimates their knowledge of how to do something or their ability to do something, what could happen?
- A relatively more experienced employee might _____.
- If someone underestimates their knowledge of how to do something or their ability to do something, what could happen?
- As an employer, how does being aware of the Dunning-Kruger effect help you?

GROUP Q & A

GROUP Q & A

Have you had any experiences with the Dunning-Kruger Effect in your office?

GROUP Q & A

Knowing what you know now about the Dunning-Kruger Effect, can you see where it could be potentially dangerous...or potentially helpful in your business?

GROUP Q & A

What are some ways you can eliminate the Dunning-Kruger Effect from being potentially dangerous?

GROUP Q & A

What are some ways you can use the Dunning-Kruger Effect to be helpful?

GROUP Q & A

How does the Dunning-Kruger Effect affect the land title industry?

CONCLUSION

CONCLUSION

According to the original authors, the following is advice on how to avoid the Dunning Kruger Effect:

- The first step is recognizing that self-evaluation is tricky and prone to errors. Consequently, simply being aware of it can help you avoid over or underestimating your abilities. You can look for the signs.
- If you think you are bad at something, it likely means you have some insight into your limitations. That is a GOOD thing.
- On the other hand, if you think you're an expert, remain humble and recognize there is always room for improvement.

CONCLUSION

- Ask yourself - Am I new to this subject area/task? If yes, I am probably not an expert or even above average!
- Low performers tend to struggle with criticism and may be resistant to self-improvement.
 - By embracing feedback and using it mindfully, you can move forward and avoid the negative consequences of the DKE
 - Don't be afraid to see feedback and criticism
 - Be open to learning and growing
 - Remember that there is always more to learn
- Recognizing your limitations is the first step to becoming more knowledgeable and competent

CONCLUSION

1) Think about obtaining more than one source of information.

2) Be open to new ideas – how difficult is it to see the “other side”?

3) How do we attract people to the industry – how do we share information?

CONCLUSION

4) Never stop learning!

- a) Participate in ILTA education & meeting opportunities; volunteer; read communications provided by ILTA
- b) Refer to the ILTA Abstracting Standards “Blue Book” available to you on the ILTA website
- c) Be familiar with Iowa Title Guaranty requirements and read their communications
- d) Keep current with Iowa Code changes
- e) Refer to the Iowa State Bar Association’s Title Standards

HELPFUL AT ANY AGE!



CITATIONS AND RESOURCES

- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121-1134.
- <https://youtu.be/4FGnb2lgPBA> (4.21 Minutes) – “The Dunning Kruger Effect (“THE JUICE”)” Sprouts Video
- <https://www.youtube.com/watch?v=eVlvxHJdql8> “13 Study Tips: The Science of Better Learning” Sprouts Video
- <https://health.clevelandclinic.org/cognitive-bias/> Cleveland Clinic, May 2, 2023 Mental Health, Cognitive Bias 101: What It Is and How To Overcome It
- Iowa Code 614.14
- ChatGPT

ACKNOWLEDGEMENT AND THANKS

ILTA Education Committee Members

Special Thanks for Presentation:

Jennifer Brown, Brent Calvert, Emily Collins, Jan Gemar, Beckie Haas, Katelynn Miller, and Jo Anne Reed

Special Thanks to Presenters:

Jennifer Brown, Brent Calvert, Beckie Haas, Katelynn Miller, Jo Anne Reed, and Sherry Shaw

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**THANK YOU!
HAVE A NICE DAY!**

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