Truthiness or Evidence-Based Reasoning? A Critical Thinking Exercise for the First Year Experience

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Truthiness or Evidence-Based Reasoning?

A Critical Thinking Exercise for the First Year Experience

**The practice and the need it addresses**

**Evidence this practice benefits UNLV Students**

**Resources and where to find them**

**How other UNLV teachers might adopt this practice**

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**Purpose:** To Improve Critical Thinking Skills

**Procedure:** A 2-day Exercise

**Day One:** First Class Period

Step 1: Show Ted Talk Video


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**Step 2: Deliver PowerPoint Lecture on critical thinking and truthiness, introduce scale for evaluating evidence**

**Critical Thinking:** 7 Steps

1. What am I being asked to believe or accept?
2. What evidence is available to support the claim?
3. What alternative explanations are there to interpret the evidence?
4. Rate the evidence/alternatives on a 0-10 scale based on validity/strength (see Figure 1).
5. What assumptions or biases came up when doing the above steps? (e.g., using intuition/emotion, or personal experience).
6. What additional evidence would help us evaluate the alternatives?
7. What conclusions are most reasonable or likely?

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**Barriers to Critical Thinking**

- **Biases**
- Emotional reasoning (truthiness)
- Overuse of personal experience
- Small case studies

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**Truthiness**

‘Truthiness’ was first coined by Steven Colbert during “The Colbert Report” television show and is defined as using a gut-sense feeling in decision making instead of rational thinking and empirical evidence to make decisions or as preferring what one wishes to be true over logic and reasoning.


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**Scale for Recommendation of Evidence**


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**Evaluating Evidence**

- **8-10 High** Further research is very unlikely to change our confidence in the estimate of effect.
- **7-5 Moderate** Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
- **4-2 Low** Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
- **1-0 Very Low** One or more studies with some limitations
- **0-0 Null** Any estimate of effect is very uncertain
- **Expert opinion** Not evidence-based, no direct research evidence
- **A** or **B** or **C** or **D** or **None**

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**Pedagogical Benefits:**

1. The UULOs
   - Inquiry and Critical Thinking
   - Communication
   - written and oral
   - Citizenship and ethics

2. Great opportunity to discuss the rules of debate and how educated people comport themselves during factious discussions.

3. Active Student Engagement

4. Students researched a topic, worked independently and in groups, engaged in discussion and debate.

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**Example Report from Student:** “I like the freedom and some of the assignments we have. (like the discussion on marijuana)”

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**Resources and where to find them**

**How other UNLV teachers might adopt this practice**

- As demonstrated, this practice is easily adopted into the classroom and clearly translatable across disciplines. Critical thinking is fundamental to mature reasoning and necessary in all disciplines.

- Kraus, et al. (2013) offer nine modules for instructors to choose from. It is possible to tailor this exercise to numerous disciplines and other introductory level courses (FYE or 101 level courses).

- Students were positive and very engaged in this debate. Verbal student feedback was highly positive.

- To maximize student involvement, the final topic should be of pressing interest and I chose legalizing marijuana (which was timely and very relevant to my students), but any hot-button topic may be used, as long as the students are thoroughly engaged.

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**Classroom Adoption**

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