

Understanding By Design (UbD)– Backwards Design Process
 (Modified from Grant Wiggins and Jay McTighe, 2002 for Self-Evaluation of RMAIS lessons)

UbD TEMPLATE

| Stage 1 – Desired Results | |
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| <p>Content: Topic for Lesson</p> <ul style="list-style-type: none"> <i>Implicit bias in STEM and mentoring—Week 2</i> | |
| <p>Understanding (s)/goals Participants will understand that:</p> <ul style="list-style-type: none"> <i>Everyone has bias that we may not be aware of and these biases can cause us to act in ways that do not reflect some of the good values we hold, such as fairness, equality, merit-based rewards, etc.</i> <i>We can reduce the negative impacts of implicit bias by recognizing the biases we may have, working to be mindful of our decisions, and utilizing some strategies from diversity training.</i> <i>Bias can show up in science, academia, universities, our labs, our mentoring relationships, etc.</i> | <p>Essential Question(s):</p> <ul style="list-style-type: none"> <i>Were you surprised by anything in the IAT? (no pressure to share your results)</i> <i>Where can bias show up in STEM? Your mentoring relationships? Academia in general?</i> |
| <p>Lesson objectives (outcomes): Participants will be able to demonstrate:</p> <ul style="list-style-type: none"> KNOWLEDGE: <ul style="list-style-type: none"> <i>Recognize the particular areas in which you might be biased</i> <i>Understand how bias shows up in STEM and your career and relationships</i> SKILLS: <ul style="list-style-type: none"> <i>Practice acknowledging bias in academic/scientific situations, as described by articles</i> <i>Think critically about how bias can show up in your mentoring relationships and academia in general</i> <i>Practice slowing down your decisions and judgements while reading and discussing the articles</i> | |
| Stage 2 – Assessment Evidence | |
| <p>Performance Task(s):</p> <ul style="list-style-type: none"> Participate in discussion on IAT results (with or without sharing particular results) Participate in discussion of articles of gender bias in STEM | <p>Other Evidence:</p> <ul style="list-style-type: none"> Post-assessment at the end of the two weeks of bias modules. Each person does some self-reflection for a couple minutes on the end to think about what they've learned over the past two weeks and how they might incorporate any new information into their decisions and relationships. |
| Stage 3 – Learning Plan | |

Learning Activities:

- Introduction/recap of Week 1 of the implicit bias modules.
 - Briefly remind class what implicit bias is, where it comes from, and that understanding our own biases can help us fight them and the norms that reinforce biases.
- Discuss results from the IAT, if people are willing to share. (Treat IAT results like medical information: it's confidential, unless you choose to share.)
 - Did anything surprise you about your results? Do you think taking a test was useful for you? Do you feel motivated to evaluate and change your behavior after taking a test?
 - Balance defensiveness and normalizing bias. Limit defensiveness about your biases by explaining that everyone has biases just because of the society we grew up in. Just because we all have biases doesn't mean it's okay to act on those biases. By recognizing where your bias is, you can be better able to confront it in your life.
 - We have implicit biases, but we can work to form new connections in our minds and we don't have to act on our unconscious reasoning.
- Reminder about strategies for overcoming bias
 - [Explicitly trying to set aside your bias can be an unhelpful practice because it takes so much energy that people just revert to their old biases. Instead, we can build structures to limit the ways that bias can influence us. It's hard to make conscious decisions all the time because of limited willpower, so we should make habits that help us to keep our goals.]
 - Perspective taking
 - Acknowledge your own weaknesses
 - Slowing down decisions and adding structure
- Discussions on readings (assigned as homework/read before class)
 - Everyone will read all articles before class, thinking about their own implicit bias, as revealed by the IAT. During class, everyone will be divided into groups with each group assigned an article to discuss in more depth, including the questions below. After small group discussions, each group will share with the class what they talked about and any insights they had.
 - Questions for small group discussions:
 - How does bias show up in STEM/scientific careers/other elements of academia?
 - How does bias show up in grad student-mentee relationships?
 - How does bias show up in grad student-faculty relationships?
 - How can bias show up in your RMAIS module?
 - Ideas for articles to read (before class) and discuss (in class):
 - (1) Why men don't believe the data on gender bias in science
 - <https://www.wired.com/story/why-men-dont-believe-the-data-on-gender-bias-in-science/>
 - (2) Why Subtle Bias Is So Often Worse than Blatant Discrimination
 - <https://hbr.org/2016/07/why-subtle-bias-is-so-often-worse-than-blatant-discrimination>
 - (3) Researchers Find Women Make Better Surgeons Than Men
 - http://time.com/4975232/women-surgeon-surgery/?utm_campaign=time&utm_source=twitter.com&utm_medium=social&xid=time_socialflow_twitter
 - (4) Thanks for Listening
 - <https://www.chronicle.com/article/Thanks-for-Listening/233825>
 - (5) What will it take to keep women from leaving STEM?
 - <https://hbr.org/2016/09/what-it-will-take-to-keep-women-from-leaving-stem>

- Wrap-up – talk about what we’ve learned and how to find more resources.
 - Implicit bias is a really big subject, so we’ve only skimmed the surface in the two weeks of the bias modules. There are many other resources out there to help you. The CSU Women and Gender Collaborative website has many great resources to keep you learning. You can also attend campus events on the topic and be supportive of inclusivity in STEM and other fields. It’s really hard to overcome implicit bias, so learning more about the subject can help you to become familiar with the problems and be part of the solution. There are many resources to help you learn and understand your biases.
 - Take more IAT tests, if you feel comfortable, to further explore your own biases.

Keywords:

Implicit bias, unconscious bias, mentoring, STEM

Additional References:

<https://hbr.org/2017/04/dont-give-up-on-unconscious-bias-training-make-it-better>

<https://www.nature.com/articles/495033a>

<https://diversity.ucsf.edu/resources/strategies-address-unconscious-bias>

<https://link.springer.com/article/10.1007%2Fs10869-012-9264-7>

<http://tlab.princeton.edu/demonstrations/>

<https://outsmartinghumanminds.org/module/about-face>

<https://link.springer.com/article/10.1007%2Fs10869-014-9384-3>

<https://hbr.org/2016/07/why-subtle-bias-is-so-often-worse-than-blatant-discrimination>

https://static.nytimes.com/email-content/RR_1293.html?nlid=48640646?smid=fb-nytimes&smtyp=cur

<https://www.wired.com/story/why-men-dont-believe-the-data-on-gender-bias-in-science/>

<https://thecollaborative.colostate.edu/education/>