**Questions to answer for McIntosh et al. (2021) reading:**

1. Research Questions
   1. What is/are the authors’ research question(s)? Think about the big, underlying question as well as the specific ones which they are able to answer in the context of the present study.
   2. What are their answers to the research question(s)?
2. Data and Sample
   1. Describe the study’s sample (From what geographic area were participants recruited? What were the criteria for inclusion? What are some of the characteristics of the schools in the study? To whom do these results generalize?)
   2. What are the three outcomes the authors examine? How are these outcomes measured?
   3. Be prepared to discuss what the values (and superscripts) in the row in Table 1 entitled *% Black* mean. Be prepared to do the same for the row entitled *Exc. Discipline Index* in the 2017-18 panel of Table 2.
   4. What does one row in the researchers’ dataset represent? Can you construct a table that recreates the basics of how this dataset is structured (replace var1 and subsequent columns with the variables you would expect to see in this dataset; *list only critical variables, you don’t need to name every single one*)?

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| id | var1 |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |

1. Analytical plan
   1. Describe the research design of the study. Be prepared to explain how the use of change scores and the comparison of non-intervention Turnaround Schools and Other Schools to Intervention Schools buttresses the authors’ claims to have detected a plausibly causal effect of the intervention. What are the benefits of designing the study in such a fashion? What are the limitations?
   2. Can you write out a formal general linear model for the analysis the authors conduct?
   3. What is/are the null hypotheses for the analyses presented in the first panel of Figure 1?
2. Results
   1. Read the sentence at the bottom of pg. 358 that begins with, “For exclusionary discipline, after accounting for…” What does the phrase*, “neither the Other Turnaround Schools (B = −3.36 [-6.33, −.38], p = .030) nor All Other Schools (B = −5.93 [-8.63, −3.22], p < .001; model F(13, 1791) = 3.93, p < .001, Adj R2 = .02) showed as much improvement as the Intervention Schools”* mean? Be prepared to explain what each of the numbers in the preceding sentence represents. *Note: you can interpret the Adj. R2 as equivalent to the R2 value, accounting for the number of predictors in the model.*
   2. Consider the number *B* = -5.94 at the bottom of pg. 358. To what does this number correspond to in Figure 1?
3. Threats to validity/Methodological improvements
   1. In your mind, what are the most serious threats to internal validity in the design of this study?
   2. What about threats to external validity?
   3. Where are some ways in which you could think of improving the research design and/or statistical analysis and/or communication of results from this research study?