**EPSY 8225: Operational Measurement**

**Equating Assignment**

The Equating Assignment will include linear, equipercentile, and IRT equating. The linear and equipercentile equating tasks will be completed with CIPE. The link is available at the class website. The IRT equating task will be provided next week.

Recall that the challenge with nonequivalent group design is that the two forms are administered to two groups likely from different populations. Thus, we need to estimate a synthetic population. Then we can estimate the equating function:



1. Report the Mean and SD for the original populations: Group 1 on form X and Group 2 on form Y and both groups on the common items (form V). Then report the synthetic population results for Tucker and Levine linear methods for Form X and Y. What do these values tell you about the two populations and/or the two forms (and common items)?
2. Similarly report the synthetic population results for the Mean, SD, and Skewness and Kurtosis for the Equipercentile (EQ%TILE) equating method for Form X and Y.
3. For these methods, CIPE also gives you the synthetic population slope and intercept for the Mean and Linear methods. For both Tucker and Linear methods, take the estimates of the slopes and intercepts and write the equating functions, based on the presentation from class. Can use slope/intercept form or the full deviation form.
4. Compare the standard errors across the three methods. What do you observe?
5. Repeat the above four steps for the synthetic population weight where W = 1 (synthetic population is represented by the new form group) and again for W = 0.5 (synthetic population is represented equally by the two nonequivalent groups, weighted equally).

Based on the discussion of equating under nonequivalent designs, what else do you notice in the CIPE output?