Did You Know? READING

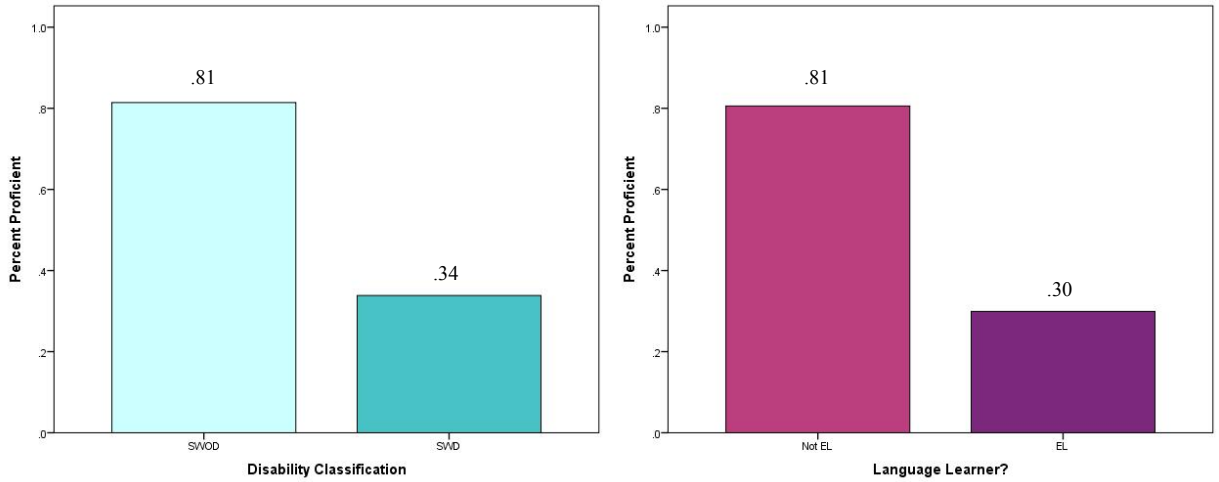
Research Note No. 4 – Feb. 2018

Despite great interest in academic achievement gaps, there is little consistency in how gaps are measured and reported. *The size and even the presence of gaps may be misunderstood in many instances because different methods are used for measuring gaps.*[1]

The good news: *There are well established methods called effect size (ES) measures* that express group differences using a common yardstick (standard deviation units). Use of ES measures can reduce subjectivity and foster better understanding of group differences.

The challenge ahead: *Many educators, analysts, and policy-makers will need additional professional development* to learn about ES and better ways to represent achievement gaps.

Differences in Percent Proficient for Students with Disabilities and English Learner Students



- For example, in the figure above, differences in percent proficient (PP) on the Arizona state reading/language test for fifth-grade students with disabilities (SWD) and English learner (EL) students (N = 61,713 total) *seem about the same.*
- ES is calculated as the mean difference on the reading/language test scale score divided by the standard deviation (SD; for additional detail see: ES Details)
- Converted to ES, the gap on the left is 1.08, and the gap on the right is 1.27, almost .20 SD larger for EL students, revealing a noteworthy difference (equal to almost half [45%] of an academic year of growth) in the size of the achievement gap for SWD vs. EL students.[2]
- General rules of thumb for interpreting ES are: zero is equivalent to no difference; ES of about 0.20 is considered "small," about 0.50 is "medium," and 0.80 or more is "large."
- To see examples using ES measures to report achievement gaps, see DYK No. 1 and DYK No. 2.

[1] **For more information, see:**
Stevens, Anderson, Nese, & Tindal (2016). Using Effect Size Measures to Estimate and Report Achievement Gaps, paper presented at NCME; available at our website: www.ncaase.com

[2] Note that AZ EL testing policies differ from many other states and so this result may not generalize.

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