



NAEP Achievement Levels: Interpret and Use with Caution

Nobody Does It Better. No test developer, whether a commercial group or a government agency, expends more resources or makes a more concentrated effort than the National Assessment Governing Board to implement generally accepted methods (Cizek, 2001) when setting student performance levels. Nonetheless, even NAEP achievement levels must be interpreted and used with great caution.

Achievement Level Descriptors. The table illustrates the difference between the NAEP *Proficient* achievement level and NAEP *proficiency in the subject* (i.e., the NAEP *Basic* achievement level) via English language descriptors collected from a variety of NAEP sources and plausible classroom letter grades. They help define and clarify how NAEP's *Proficient* and *Basic* achievement levels should be understood, interpreted, and used.

NAEP Achievement Level	English Language Descriptors Used to Explain the Meaning of the NAEP Achievement Levels	Letter Grade (A-F)	
		Stoneberg (2007)	Ravitch (2012)
<i>Advanced</i>		A to A+	A+
<u>Proficient</u>	Some of the best students you know Many words and terms above grade level Mastery of complex material Higher than grade level performance	B+ to A	A
<i>Basic</i>	<u>Proficiency in subject</u> (common language meaning) Overall understanding of grade appropriate text More than minimal competency	C- to B	B and C
<i>Below Basic</i>	Minimal competency	F to D+	Concern

Fundamentally Flawed. A National Academy of Sciences (NAS) external evaluation in 1998 was not kind to NAEP's "achievement level scores" (Pellegrino, et al, 1998). NAS found that achievement-level-setting procedures were fundamentally flawed [i.e., "not scientific" because the cut-scores cannot be replicated]. The judgment tasks were difficult and confusing; rater's judgments of different item types were internally inconsistent; appropriate validity evidence for the cut-scores was lacking; and the process had produced unreasonable results. NAS recommended that the achievement levels be used only on a developmental basis.

Trial Basis Only. A National Center for Education Statistics (NCES) web page entitled *Status of Achievement Levels* (2013) provides this statement about using the NAEP achievement levels. The strongly edited statement is consistent with the findings and recommendations from the National Academy of Sciences' external evaluation report:

Federal law requires NAEP achievement levels be used on a trial basis until the Commissioner of Education Statistics determines that the achievement levels are "reasonable, valid, and informative to the public." *So far, no Commissioner has made such a determination.* Thus, achievement levels should continue to be interpreted and used with caution. The National Assessment Governing Board and NCES believe that the achievement levels are useful for reporting trends in the educational achievement of students in the United States.

Not for Trend Comparisons. A recent statistical study focusing on NAEP and state achievement level scores has not supported their use for reporting trends. "Trend comparisons require both technical care and substantive consideration. As useful as PAC [percent above cut-score] statistics have been in communicating test results to the public, their properties as trend statistics render them ill-suited for trend comparisons" (Ho, 2007).

References

Cizek, G.J. (Ed.). (2001). *Setting performance standards: Concepts, methods, and perspectives*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Ho, A.D. (2007). Discrepancies between score trends from NAEP and state tests: A scale-invariant perspective. *Educational Measurement: Issues and Practice*, 26(4), pp. 11-20.

Pellegrino, J.W., Jones, L.R., and Mitchell, K.J. (Eds.). (1998). *Grading the Nation's Report Card: Evaluating NAEP and transforming the assessment of educational progress*. Washington, DC: National Academy Press. Available online:
<http://eric.ed.gov/?id=ED446096>

Ravitch, D. (2012, May 14). *What do NAEP scores mean?* [Blog Post]. Retrieved from <http://dianeravitch.net/2012/05/14/what-do-naep-scores-mean/>

Status of Achievement Levels. (2013). Washington D.C.: U.S. Department of Education, Institute for Education Science, National Center for Education Statistics. Retrieved December 6, 2013, from <http://nces.ed.gov/nationsreportcard/achlevdev.aspx>

Stoneberg, B.D. (2007). Using NAEP to confirm state test results in the No Child Left Behind Act. *Practical Assessment, Research, and Evaluation*, 12(5), 1-10. Retrieved from <http://pareonline.net/genpare.asp?wh=4&abt=stoneberg>

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