

This paper uses an abbreviated interrupted time series methodology to investigate how NCLB (introduced in 2002) affected NAEP scores in math and reading between 1990 and 2009. Effects on 4th and 8th grade math are demonstrated when all public schools in the nation are compared separately to all Catholic schools and then to all non-Catholic private schools. Similar effects are also demonstrated when states that have, or adopt, high standards for student proficiency in 2003 are compared to states whose standards are lower and thus entail less serious consequences for the amount and type of reform NCLB requires a state to make. Effects are on the order of .30 standard deviation units for 4th grade math and .20 for 8th grade math. Evidence is also presented showing that, consonant with the presumed mediating process, more schools change and do so more radically the higher a state's proficiency standards are set. Much of this work showing effects on math achievement was presented last year at SREE and is detailed in a 2008 dissertation by Wong. Also using an interrupted time series method, Dee and Jacob have shown that states that adopt an accountability system with consequences for the amount and type of change a state's schools have to make do better in 4th grade and perhaps also 8th grade math. However, their work does not deal with whether these sanctions are powerful or weak ones that require considerable or little change in a state's schools - the topic of the first state analyses presented above. We demonstrate that the states adopting an accountability system with any kind of consequences in 2002 are independent of the states whose higher or lower standards at that time require more or less school change. This orthogonality facilitates testing the joint consequences of both adopting a new accountability system with sanctions and also of linking this system to higher or lower proficiency standards that entail more or less serious consequences for school reform. Does combining these two mechanisms create some positive emergent property that leads to results greater than the sum of each mechanism? Or are the two mechanisms simply additively related? Or do they substitute for each other? Results are presented for 4th and 8th grade math and also for 4th grade reading. The math results indicate a substitutive effect. However, an additive effect is observed for reading such that, for the first time in this literature, a small (.10) but statistically significant effect is observed. For 4th and 8th grade math, either adopting an accountability system with consequences or setting high standards for proficiency makes a difference. But for a reading effect to be observed with these data requires not just a new accountability system but also one with higher rather than lower proficiency standards.

<http://www.northwestern.edu/ipr/people/tcook.html>