

Why are Indicators of Dropout and Completion Rates Important for Policy and Practice?

Richard Rothstein, Presentation to NRC, October 23, 2008

Dan Losen has raised an important issue. Reducing dropout rates should be an important school goal, but current NCLB incentives are to “push out” low-scoring students. But we should not underestimate how radically the existing narrow test-based accountability system of NCLB would have to be modified in order to balance aspirations for higher academic achievement levels with those for higher graduation rates. After all, even with existing push-out policies, most schools will soon be failing to meet adequate yearly progress requirements, if they are not failing already (Dillon 2008). Reducing the push-out of low scoring students will propel that share even higher.

But there is a larger problem: There is a developing consensus among education policy makers that the next wave of school reform should be to *increase* the academic content of a high school education and to increase the alignment of high school academic coursework with academic college admission standards. Although proposals along these lines have been given lip service since *A Nation at Risk*, governors and some education advocacy groups now claim to be getting serious.

It is not possible to enforce higher standards without admitting the possibility that more students will fail. That’s what enforcement is about. It becomes even more inconceivable to substantially reduce dropout rates if the academic content of a high school diploma is to be raised. There is, however, an even more important reason to reconsider the current policy obsession with holding schools accountable for higher academic test scores. If the policy were to succeed, it runs the risk of diminishing the value of a high school diploma for students who are most at risk of failure, even if they succeed in graduating.

Those of you who think about dropouts are undoubtedly familiar with the work of Stephen Cameron and James Heckman (1993) on this topic. He reports that students who drop out and then obtain a G.E.D. have worse labor market outcomes than high school graduates; indeed, their outcomes are no better than those of dropouts. Tyler, Murnane and Willett (2000) find somewhat better outcomes for G.E.D.s than for dropouts (for whites only), but still worse than for high school graduates. These are not surprising results until you consider that the academic qualifications of a G.E.D. are more rigorous than those met by most high school graduates, because cognitive ability represented by the passing score on each of the five G.E.D. subject area tests (in mathematics, science, writing, social studies, and the arts and literature) was set to be at about the level achieved by the highest scoring $\frac{3}{4}$ of high school graduates. In 2002, the G.E.D. passing score was set higher – today, a dropout who earns a G.E.D. must have tested ability at the level achieved by the highest scoring $\frac{2}{3}$ of all high school graduates. Because those earning a G.E.D. must pass all five tests, the minimum overall cognitive ability of G.E.D. recipients is probably closer to that of the 50th percentile high school graduate. Professor Heckman has not reported on the relative outcomes of G.E.D.s under the new, higher, passing standards. It would be important to know whether the labor market outcomes of G.E.D.s are still inferior to those of high school graduates whose overall cognitive ability, on average, is inferior. This is an important research area for those concerned with reducing dropout rates. All we can say now is that high school graduates with somewhat poorer academic test scores have better labor market outcomes than G.E.D.s with somewhat better academic test scores.

Professor Heckman does not explain why a high school diploma is so valuable; he can only say that “tests like the GED measure skills that are only weakly related to the skills valued by employers.” We should note that “tests like the GED” are even more challenging than those

now used for school accountability under NCLB. There are five G.E.D. tests – as noted above, in mathematics, science, writing (including an essay), social studies, and the arts and literature. NCLB now requires only math and literacy, although advocates of greater secondary school accountability today advocate increasing the scope of tested material. Experience with the G.E.D. suggests that even with increased subject area testing, NCLB-required tests would still “measure skills that are only weakly related to the skills valued by employers.”

Why are we testing the wrong things – or more likely, not testing all of the right things? Perhaps those who remain in high school to graduate develop non-cognitive skills which are valued by employers. A cynic might say that anyone who has the self-discipline to sit through boring high school classes has just the qualities the labor market seeks in low-skilled work. Another explanation might be that the broad range of activities, beyond academic preparation, to which high school students are exposed, prepares them for success. These activities (the development of interests in elective courses, participation in athletics, student government and other extra-curricular activities, as well as the self-discipline of doing homework, showing up on time, taking exams, and so on) may develop the self-discipline required for the workplace, the ability to cooperate with fellow workers to solve problems, the ability to set goals and develop plans for meeting them.

If this speculation is correct, then simply tacking NCLB’s goal of raising academic test scores and making the high school curriculum more academic, onto our goal of raising graduation rates, even if both goals could be met simultaneously, could be self defeating. If we press to make high school a nearly exclusively academic endeavor, we run the risk of diluting the value of a high school diploma for the labor market. By making a diploma more academic, we

could threaten the advantage that graduates now have over dropouts who take the G.E.D. route, even if we did improve the graduation rate.

But both goals probably cannot be pursued simultaneously. A desire to reduce the dropout rate invites us to revisit the popular conclusion that all students need academic college preparation to ‘compete in the 21st century economy’. Projections of future labor market skill demands simply do not support this conventional wisdom. The most recent analysis from the Bureau of Labor Statistics concludes that that about 55 percent of job openings likely to be available between 2006 and 2016 require only “moderate-term on-the-job training” (15 percent) or “short-term on-the-job training” (40 percent).^{*} Only about 23 percent of anticipated job openings require a college degree or more (Dohm and Schniper 2007). This is less than the current rate of college graduation.

There is no doubt that the skill requirements of the U.S. economy are rising slowly, and the BLS projections, which necessarily assume only a continuation of past trends, may understate this rise. But even a dramatic upward re-statement of skill requirements suggests that our widespread abandonment of vocational (or “career,” or “school to work”) programs in secondary schools has been a terrible mistake. We now must re-explore “multiple pathways” to success for youth who are at risk of dropping out (Schwartz, 2004).

To complement these reforms, we require an entirely new accountability system that includes basic academic skills but that also requires students to achieve a broad range of outcomes that the labor market and our democracy require. These include social skills, the ability

^{*} Occupations requiring “moderate-term on-the-job training” are defined as those where “the skills needed to be fully qualified in the occupation can be acquired during 1 to 12 months of combined on-the-job experience and informal training. Examples are truckdrivers, heavy and tractor-trailer; and secretaries, except legal, medical, and executive.” Occupations requiring “short-term on-the-job training” are defined as those where “the skills needed to be fully qualified in the occupation can be acquired during a short demonstration of job duties or during 1 month or less of on-the-job experience or instruction. Examples of these occupations are retail salespersons; and waiters and waitresses.”

to think critically and to reason (not presently given much weight in most NCLB-mandated academic assessments), citizenship skills, physical and emotional health, specific job-related skills, and an appreciation for the arts.

Clearly, our schools are not currently structured, or given incentives, to develop this broad range of skills, so an accountability system that was useful would have to set its initial standards quite low, to avoid even greater “push-out” than we now have. This requires a radical re-thinking by the policy community of what we want schools to accomplish. This conversation will take some time. But trying to ratchet up the academic requirements of high schools, while also expecting higher graduation rates, is not only contradictory but, even if achievable, not the direction we should go.

Most education policymakers now instinctively reject this approach because, they think, it is not possible to assess these broader goals, and we have to start where we can, assessing the basic academic skills that we know how to test. This reaction reflects not only a failure of imagination but an ignorance of the history of educational assessment. For example, when the National Assessment of Educational Progress (NAEP) was first designed in the 1960s, it set out to measure the broad range of skills that successful graduates need. And it actually did assess them in its first few administrations. NAEP was reduced to academics-only when NAEP budgets were cut in the early 1980s. When NAEP budgets were later restored, the nation was in a frenzy about academics, and none of the broad coverage of early NAEP returned.

Here are a few examples. Consider citizenship. In the early 1970s, when racial segregation was still present in America, NAEP asked 13 year olds what they should do if they passed a public park and saw children being denied admission because of their race. This was a free-response question, and correct answers could range from tell their parents or teacher, write a

letter to the newspaper, or complain to public officials. “Do nothing because it is none of my business” was not given credit as a correct answer.

NAEP attempted to determine if students understood that individuals should be judged on their own merits and not held responsible for misdeeds of others. So in 1969, NAEP interviewers asked both 9- and 13-year-olds whether, if the father of a friend was jailed for theft, they would still invite the friend to their houses to play. To assess students’ commitment to civil liberties, 13- and 17-year-olds were asked if they thought someone should be permitted to say on television that “Russia is better than the United States,” that “Some races of people are better than others,” or that “It is not necessary to believe in God.” For 13-year-olds, the questions were posed by an interviewer while the questions appeared on a paper-and-pencil test for the older youths. (Only 3% of 13-year-olds and 17% of 17-year-olds thought all three statements should be permitted, suggesting that radical reform of middle and high school curricula was in order.)

NAEP also used survey questions to report to the public on the citizenship development of youth. It asked adolescents if they had ever done volunteer work, complained to a public official about any policy, written to a newspaper. I do not imply here (and NAEP did not imply) that an accountability system should find a secondary school failing if every student had not engaged in volunteer work. But I think we could agree that a secondary school where *no* student had ever done volunteer work was a deficient school. Once we set reasonable standards, determining whether schools were meeting them should not be difficult.

Early NAEP included questions to assess the emotional health of 17-year-olds. For example, some questions probed whether youths were adequately prepared for responsible parenting. Seventeen-year-olds were presented with a list of baby behaviors – fear of strangers, speaking in short sentences, following objects with eyes, recognizing parents, crawling on hands

and knees, controlling urine and bowel movements – and asked whether these were typically found in babies younger or older than 18 months of age. If we thought such knowledge should be part of the secondary school health curriculum, assessing whether youth are achieving would not be difficult.

Another set of early NAEP questions attempted to determine whether youth had the self-assurance to make difficult decisions in situations that require courage or emotional maturity. In 1977, 17-year-olds were asked by NAEP, in a multiple choice exercise, what to do if visiting a friend whose six-month-old baby had visible bruises. The correct answer was “suggest that your friend call her baby’s doctor about the bruises.” Incorrect choices included “ignore the bruises because they are none of your business” and “accuse your friend of beating her child.” A follow-up question asked what to do if, later, bruises remain and the friend says that the baby fell out of her crib. The prompt said “you are now suspicious that your friend may have hurt the baby intentionally, because she did not seek help,” and asks what to do next. The correct answer was “call the local child health agency and report your suspicions.” Incorrect choices included “do nothing more because you have done all you can...” “call the police...” and “stay with your friend to make sure she does not harm the baby again.”

I discuss all this in greater detail in my new book, *Grading Education: Getting Accountability Right* (2008) The point is not that these early NAEP items were the best questions we could design, but only that we know how to assess whether young people are developing the broad range of outcomes we expect. If we want to hold schools accountable for developing these outcomes, we can do so. What is lacking is not know-how, but the will to do so. If we want not only to increase the rate at which youth earn diplomas, but the value of those diplomas, both for the labor market and for our democracy, we will have to abandon our current narrow test-based

accountability system and include graduation rates along with a much broader range of outcome measures.

Finally, I want to address a different, but related issue. In what I have said so far, I have referred to “holding schools” accountable. Dan Losen has likewise referred to holding schools accountable. An important caution is in order: it is conventional to think that high drop out rates reflect a failure of particular high schools. Yet by the time students at risk of dropping out reach high school, their failure is all but inevitable. It is our entire system of education and youth development that is failing large numbers of at-risk youth, and it is foolhardy to try to hold individual secondary schools, or secondary schools overall, accountable for reducing the dropout rates of students who enter secondary school ill-prepared to succeed. School districts and schools should clearly have programs to support high-risk students in their efforts to complete high school: nevertheless, high schools are, at best, a last defense against failure that should have been prevented long before.

Again, I cite James Heckman. The achievement gap in high school is present before children enter elementary school. Thus, school interventions are necessarily compensatory – efforts to offset pre-existing inadequacy. An alternative, and more effective approach would be to prevent the achievement gap from emerging in such magnitude in the first place. This insight has recently become well known from Professor Heckman’s work, as well as from the National Academy of Sciences study on the neurobiology of early childhood development *From Neurons to Neighborhoods* by Jack P. Shonkoff and Deborah Phillips. In a recent paper, Heckman, Shonkoff and their colleagues put it this way: “[S]kills beget skills, success breeds success, and the provision of positive experiences early in life is considerably less expensive and more

effective than the cost and effectiveness of corrective intervention at a later age" (Knudson et al. 2006).

The foundations for learning both academic and behavioral skills are best acquired early in life. Children whose development is healthy in-utero and onward are able to build on prior skill levels to develop increasing levels of competence. High quality early childhood programs also have power to alter lifelong outcomes. Research in cognitive science, such as the Shonkoff and Phillips volume, stresses the interdependence of environmental and genetic factors, and demonstrates that children's potential is less limited if healthy development begins early.

Heckman, Shonkoff and their colleagues note that both academic and non-cognitive achievement follow "hierarchical rules:"

Later attainments build on foundations that are laid down earlier... [C]ognitive, linguistic, social, and emotional competencies are interdependent; all are shaped powerfully by the experiences of the developing child... Although adaptation continues throughout life, human abilities are formed in a predictable sequence of sensitive periods,

with prenatal development and early childhood the most influential (Knudson et al. 2006).

Heckman (2006) notes further that

[b]y the third grade, gaps in test scores across socioeconomic groups are stable by age, suggesting that later schooling and variations in schooling quality have little effect in reducing or widening the gaps that appear before students enter school....

At current levels of resources, society overinvests in remedial skill investments at later ages and underinvests in the early years.

Thus, an effective accountability system for raising the graduation rate must include all the institutions of youth development – not only high schools, but middle and elementary schools, children's health care institutions, early childhood and after school and summer programs. Only by such a comprehensive approach to accountability can we hope to increase the attainment rate without unintended, adverse consequences. And again, this approach is not novel or new.

England, for example, has an accountability system that relies on an inspectorate that simultaneously visits and evaluates the schools, early childhood programs, and adult learning institutions within a single community. It does so because there is no other way to have accountability that is consistent with the science that Heckman, Shonkoff, and so many others have advanced.

Recently, I was privileged to join a distinguished group of Americans that called for a “Broader, Bolder Approach to Education” that combines school improvement strategies with coordinated early childhood, health, and after-school efforts. You can see the statement, and join with us, at www.boldapproach.org. The statement concludes that

The public has a right to hold schools accountable for raising student achievement. However, test scores alone cannot describe a school’s contribution to the full range of student outcomes. New accountability systems should combine appropriate qualitative and quantitative methods, and they will be considerably more expensive than the flawed accountability systems currently in use by the federal and state governments.

Reducing the dropout rate requires this approach to accountability.

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