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The Truth Behind the Numbers

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THE TRUTH BEHIND

By insisting on quantifying all aspects of public education, we lose sight of what teaching and learning are all about.

In his book *Numbers Games: Measuring and Mandating American Education*, Paul Thomas of the Furman education faculty describes a public educational system that is slowly being paralyzed by a growing reliance on standardized tests as the primary measurements of the effectiveness of schools and the competence of students.

“Teachers and students today,” he says, “labor under the weight of misguided political mandates that ordain test scores with disproportionate power over the work of educators and the lives of children.”

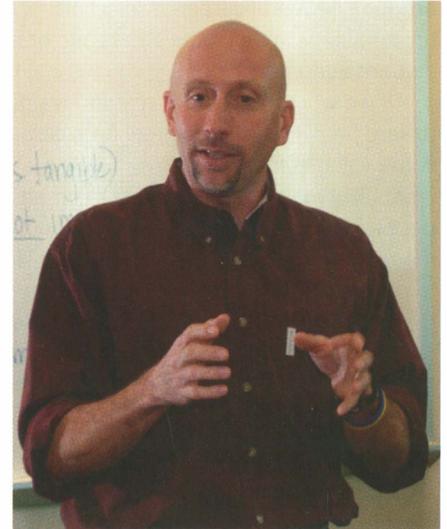
The current dynamic, he says, threatens to dehumanize the educational process by reducing students to nothing more than numbers, and teachers to robotic purveyors of information. We’re so obsessed with comparing the scores of students, schools and states, he says, “It’s as if teaching and learning are competitions to be won instead of investments in people and communities.”

Rather than making tests and test scores the goals of education, Thomas — who taught in the public schools of South Carolina for 18 years before coming to Furman in 2002 — says that tests should be just one of many components that determine a student’s potential and progress, or a school’s effectiveness.

He says, “We need to take a few steps back, re-evaluate our devotion to numbers and rededicate ourselves to each child who enters our classrooms.” Further, he says, educators must reclaim control of their profession from those who want to dictate what is taught and how it is taught.

Numbers Games was published in July 2004 by Peter Lang Publishers. *Furman* magazine asked Thomas (pictured opposite) to address his concerns and ideas in this question-and-answer format.

THE NUMBERS



Why have standardized tests emerged as the key measuring stick by which educational success is evaluated, both for individual students and for public school systems?

This phenomenon has an odd history. America in some ways embraced the scientific revolution wildly and blindly — while simultaneously maintaining a contradictory disdain for science in some areas, such as religion.

The main way that America has embraced science is in our naive belief that because something can be measured, or quantified, then it should be measured, and that the resulting “numbers” don’t lie. But this is an oversimplification. Stephen Gould writes about the mess that we create when we maintain that “intelligence” can be captured with a number or explained as a single entity.

Our belief in and obsession with numbers has evolved and escalated over the last 100 years. In the early 20th century, quantifying intelligence through testing and measuring became accepted as the most objective and accurate way to judge the effectiveness of schools and the achievement of students.

Over the past two decades, politicians have discovered the political capital available within this educational dynamic. Talking about raising standards and testing our students can be highly productive for politicians. Although the public message is, “We can improve schools by increasing testing,” few have noted that simply weighing a pig more often will not fatten a pig. But that is the simplified and misleading message of politicians who use schools for their own gain.

Growth cannot come without nourishment, and today’s students are being fed a steady diet of empty calories when the only meal that matters is a test. Teachers are forced to dole out what students need to pass standardized tests, and students thus learn that school is for testing. The process produces empty numbers, not learning.

The numbers games being played with schools and within schools reduce such complex activities as the teaching of children and the measurement of learning to easily misunderstood and manipulated numbers that become handy campaign slogans or provocative headlines. For example, in the 1998 South Carolina governor’s race, candidates Jim Hodges (Democrat) and David Beasley (Republican) ran on platforms that demonized state schools for ranking last in the country in

SAT scores — even though the College Board itself, producer of the test, disavows the use of test scores in this manner.

To risk being simplistic myself, the main problems with using any standardized test to measure the educational achievement or potential of a child, a school or a state are, first, that reliance on any single measure oversimplifies the truth; and second, testing should be used primarily to support teaching and learning — not to label. We have turned standardized tests into goals in and of themselves instead of seeing them as components in the teaching-learning process.

You suggest in your book that efforts to satisfy political mandates have caused us to devalue or even dehumanize students to the point where they are looked at as numbers and not individuals. Could you expand on this thought?

Look at almost any way we display information about students — report cards, test scores, college applications. What do you see? An array of numbers, as if no individual child even exists.

I agree with Gould that identifying something as complex as “intelligence” in a single number is horribly skewed, and I also agree with educational critics such as Alfie Kohn, who believes we have abandoned any concern for the humanity and dignity of children because of our commitment to quantifying and ranking.

Compounding the problem is that most conversations about education in America are carried on by politicians through the media. In this public discourse, education is measured in terms of “winners” and “losers,” numbers are used to label and rank, and states are pitted against each other, as if they’re in competition to see who can produce the best numbers.

While it may be culturally advantageous for Bobby to score 1560 on the SAT, I would argue that his score tells almost nothing of any value about him as a human being — and it represents little in terms of his potential when he leaves school and enters the real world. Jessica may

produce beautiful ceramics in art class, but her talent shows up almost nowhere on the charts and graphs that represent student accomplishment.

If we would apply the “results” we garner from testing toward helping students grow and learn, then I would concede some value in the way we use these measurements of achievement. But there is no respect for human dignity when we ignore people and see only numbers — especially when the measurements used are questionable, at best. The SAT may be designed to predict college success, but in reality it is no better a predictor than a student’s high school grade-point average.

Tests should not be used as fodder to label and rank but as one of many elements that determine a student’s educational progress and capability. There is a difference, and we need to make that distinction clear.

What about the calls for “raising standards” and “increasing accountability” in public education?

The idea of raising standards, often coupled with a Back-to-Basics mantra, was actually a regular refrain throughout the 20th century. In fact, at virtually any point over the last 100 years you could have heard arguments about the sorry state of education and how the quality of instruction paled compared to some distant, romanticized era.

The often idealized 1940s and 1950s were punctuated with such works as Bernard Iddings Bell’s *Crisis in Education* (1949), Mortimer Smith’s *And Madly Teach* (1949), and Arthur E. Bestor, Jr.’s *Educational Wastelands* (1953). Notably, these books and others condemned schools as socialistic — especially after it was discovered that John Dewey and other leaders in the field, such as textbook writer Harold Rigg, were socialists.

In 1959’s *Education and Freedom*, Vice Admiral Hyman Rickover, who helped lead the Navy into the nuclear age, criticized the state of America’s public school system and suggested that it imperiled national security. Rickover’s ideas led to the belief that America had fallen behind the Soviets in math and science education and to the advent of “teacher-proof curriculum,” in which teachers followed a scripted approach that reduced them to robotic dispensers of information.

Some today call for a return to this approach to instruction; some schools in Texas are actually trying it. But when instruction becomes uniform and prescribed, the human elements of learning are disregarded and the professionalism of teaching is totally erased. In a society that claims to value individuality and democracy, such standardization is inappropriate.

With George W. Bush’s No Child Left Behind (NCLB) program, another layer, now from the federal government, has been added to the accountability craze, with expanded emphasis on testing and a further proliferation of numbers. Under NCLB, the only things that matter about schools are test scores. Numbers drive policy.

Among the many Furman graduates teaching in Greenville County public schools are Gretchen Levin Marlowe ’86, middle school language arts teacher at League Academy, and Bobby Black ’96, history instructor at Mauldin High.



The result has been a disturbing momentum against the success of public schools. The accountability and high-stakes testing movement has actually oversimplified both teaching and assessment — even though all the political proclamations and proposed solutions are issued under the banner of “improving public education.”

We should also be highly skeptical of the “all-or-nothing” parameters of NCLB. For example, a local middle school received a failing grade under NCLB even though the school met 18 of 19 indicators. Its downfall was that it fell short of attendance guidelines by one-tenth of a percent. Attendance is completely outside the control of a school.

You also point to the press as a major player in the “numbers game.” What role has the fourth estate assumed in framing the conversation?

Throughout most of modern public schooling, the popular press has echoed — or spurred — the general belief that schools as a whole do not pass muster. Oddly enough, research over the past 100 years shows that Americans in general believe that although public schools as a whole are weak, somehow their local school is fine.

So what alternative exists for this excessive emphasis on tests and numbers and quantifying student achievement?

We must first change the way standardized tests are perceived. Let's use the SAT as an example.

As a test, the SAT measures only certain types of verbal and mathematical knowledge — both in what is tested and how it is tested. The exam's multiple choice format, though efficient in terms of time and cost, is highly limited. Stated simply, selecting a response is, by its nature, less authentic and less rigorous than creating a response or performing a task. Compare the ability and rigor involved when asking a child to select one of four possible answers to the question "The player who usually receives the ball directly from the center in football is . . ." to that same child actually playing quarterback in a Friday night game.

Although the SAT has been evolving in recent years, with two major changes coming this spring, these changes are mostly public relations moves on the part of the College Board. The primary "change" is designed to raise the bar, as the new mathematics portion is said to assess higher levels of algebra and geometry.

The other key change addresses the College Board's own call for more assessment of writing skills. Beginning this spring, the SAT will include a writing section. Students will be asked to answer multiple choice questions on grammar and usage, then submit a single-draft writing sample that must be completed in 25 minutes and will

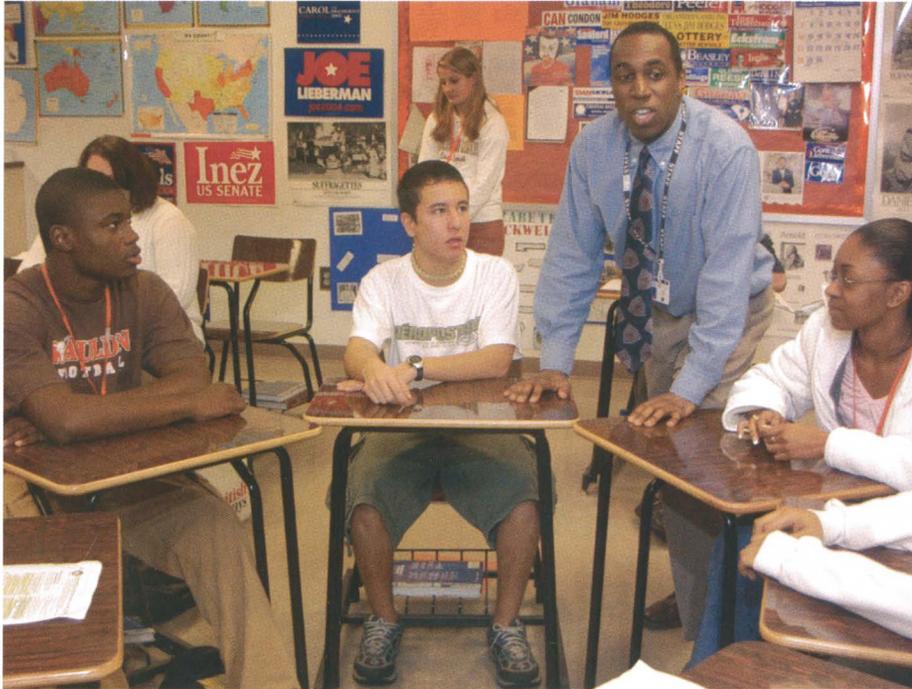
be scored by a computer. There are two significant problems here — the writing sample is far too brief, since authentic writing requires several drafts, and the scoring system, though quick and efficient, is flawed.

A computer cannot assess the most sophisticated (and important) aspects of writing, such as originality, tone or accuracy of content. The writing sample is also prompt-driven, meaning students are told what to say and how to say it.

Why should this limited test carry so much weight in determining the fate of college-bound students? After all, colleges everywhere promote their students' average SAT scores as indicators of quality and talent.

Yet the College Board's own research indicates that SAT scores are not as useful as high school grade-point average (GPA) in determining college success among freshmen. In other words, GPA — a free calculation of student achievement — predicts college success better than the SAT, which students pay \$40 to take. Canadian research shows that a student's grade-point average, courses taken in high school and activities outside of class are far better determinants of collegiate success than the SAT.

While I do not suggest any real malice on the part of the media or of politicians in their treatment of education, I believe that both use the subject primarily for their own gain — and often at the expense of children.



A crucial detail in this element of the debate is that most journalists who report on schools have little or no training in education or educational measurement. In addition, newspapers need readers, and bad news sells better than good. Thus, education is the victim of the inherent weaknesses of the press: a need for customers, and a lack of knowledgeable reporters (whose primary sources are often equally inexpert politicians).

The popular media often have goals that directly impact how the general public perceives issues. Journalists usually make their message as simple as possible and often feed perceptions that already exist. They also enjoy using numbers and charts, and schools are ripe for such displays of data. And journalists continue to rank and evaluate schools based on testing data, regardless of warnings by the College Board and others not to do so.

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Interestingly, some elite colleges do not require students to submit SAT scores. One example: Bates College in Maine, which *U.S. News & World Report* ranks 22nd among national liberal arts colleges, has 20 years of data showing that its students who did not submit their SAT scores had lower average scores on the test but identical college graduation rates to those who did submit SAT scores. In addition, their final college grade-point averages were actually slightly higher than those of the students who submitted SAT scores.

Personally, I question spending state tax money on class time and software packages that teach the SAT — a private test that supports the work of the College Board — as if the test is the goal of school instead of being just one of many measures of learning. Our blind allegiance to the SAT has led to educationally and ethically questionable practices, such as using school hours to teach SAT prep courses, building computer labs and buying software to support these classes, and asking students in art and physical education to use class time to complete SAT practice questions or vocabulary lists.

I've gone into detail about the SAT, but my point applies across the board. Standardized tests should serve as measurements of education, not as goals. And even as measurements, the tests are flawed. They measure only selected responses and narrow kinds of knowledge. In real life, we are most often asked to generate responses or to perform based on our expertise. Tests such as the SAT capture none of that real-world value.

So how do we reverse the trend?

We need to stop teaching to the test, we need to stop allowing standardized tests to be the primary measure of the abilities of our schools or our students, and we need to reconsider the spending of tax money to prepare students for these kinds of tests.

Schools and school systems are labeled “excellent” or “failing” based on the results of standardized tests. In South Carolina, the Palmetto Achievement Challenge Test is considered the primary determinant of a school’s achievement or failure; thus, everyone works as if the test is the goal. When test scores improve, the school is considered successful; when they fall, the school is labeled “below average.”

But when we reduce the schooling of children to a number that represents a group of students, we erase the humanity of those children and the humanity of the field of teaching. We need to re-evaluate our devotion to numbers and rededicate ourselves to each child. If we do not have a clear set of goals for education, then we cannot have a proper balance as to how to assess those goals.



Is it realistic to expect the emphasis on standardized testing to end?

Frankly, I cannot foresee a day when we ditch the SAT, and I certainly see no end to the numbers mania concerning schools. Accountability and testing are as much a part of American schools as desks and pep rallies.

The only hope I have grows from situations I have mentioned already. Colleges and universities have incredible power; if they de-emphasize single, standardized measures of student ability, then perhaps they could influence change in other areas. Another hope is that a growing number of parents, like me, will see how unfair the system is for many bright and gifted children who, for whatever reason, do not “test well.”

One area that I haven’t touched on here is, in an odd way, a possible savior for our schools. More and more data show that the SAT and other standardized tests are unfair to minority populations and to the poor in particular. If these groups can speak out in a unified voice, they might be able to defeat the testing mania under which we currently suffer. Ironically, political pressure could help to save schools from the tyranny of politics!

But how should we make schools more accountable? How should we use tests and evaluate the numbers?

We need to address our tracking systems and the conditions of students’ lives outside of school. We can do something about the inequities within schools, but we may never be able to overcome social ills through schools alone. We need to recognize the limits of numbers and to look closely and critically at those numbers. And we need to remember that the goal is not better numbers, but better students.

Should we have high standards for schools? And should we measure how well they are performing? Of course. But accountability and measurement must come from within the system — from educators — and testing, in particular, should be used to improve teaching and learning, not to label and rank.

For example, I have analyzed some of the 2003 SAT data from South Carolina. It is useful as research data, but not as a tool to assess the state’s schools.

A first-grader gets a “well done” from Cathy Whitehill Grills '73, who has taught at Duncan Chapel Elementary since 1989. Photos by Charlie Register

First, it shows that average SAT scores in South Carolina are primarily dependent on socioeconomic status (the Poverty Index of the school) and rates of participation (how many students in a senior class actually take the test). If a school has a low PI, then a high percentage of its students can take the SAT with average scores remaining high. If a school's PI is high, then the participation rate needs to be low. This sort of analysis shows that the quality of teaching and learning mean very little when looking at average SAT scores. Instead, how many students take the test and, more importantly, their socioeconomic status are the key determinants in an individual school's results.

We can also use test scores to identify schools with virtually the same populations in terms of socioeconomic status, but with different SAT averages. Then we can ask questions that could affect our approach to instruction: What is one school doing that differs from the other? And how does that impact the way students learn?

Ultimately, we must measure student achievement and gather data to help schools improve — not to create charts for the local paper, not to issue school report cards, and not to bolster anyone's run for governor or senator.

In *Numbers Games*, you advocate an educational system that emphasizes “teacher authority for teaching, student-centered learning and authentic assessment.” Please expand on these concepts.

The field of chemistry is profoundly impacted by chemistry professors (people “within” the profession) as well as by experts in the field from outside of academia. The same holds true for many other fields, including medicine and law.

But in public education, policies and practices tend to be driven by people outside the profession. Educators in the public schools rarely see themselves as “practicing a profession” and rarely function within their field as other professionals do. English professors are likely to be writers and literary critics, but K-12 teachers almost never are called upon as “experts” in education. This must change. Classroom teachers must gain control of their field from the inside instead of conforming to dictates issued by outside observers — or by those who haven't been in a classroom for 20 years.

We also need a shift in our teaching-learning paradigm. Learning that supports democratic values and honors the dignity of all humans has to begin with the student and work toward the larger goals of each course. Historically, schools have tended toward indoctrination, or imposed teaching; we treat learning as imposing onto students a monolithic body of knowledge regardless of their needs, interests or abilities.

Imposed teaching is easier to manage, easier to measure and easier to control, but it is not the type of learning needed in a democracy. Democracies require individuals who are

independent thinkers and who can contribute to the larger discourse. How can students fulfill that obligation after 12 years of being told what to think and how to perform?

Learning must begin within each student, and learning should be driven by the student. A typical example: Many students are assigned *The Scarlet Letter* in high school, but they rarely read the novel because they know the process. The teacher tells them what the book is about, taking great care to cover what's likely to appear on a test or detailing what students should say (and how they should say it) in an essay. Clearly, the teacher is doing most of the work and most of the thinking. That responsibility should be shifted to students. Humans by their nature are learners, but schools tend to squelch that drive by their urge to impose and coerce.

We also need to re-examine student assessment. Learning should be measured by evaluating student responses through essays, short answers and oral responses, or through their efforts to create an original artwork, sing a song, design a small business or tear down and reassemble an engine. Multiple choice tests are limited by their tendency to isolate skills as if those skills exist in a vacuum. Subtracting just to subtract is a pointless mathematical exercise; subtracting as part of keeping an accurate checking account is altogether a different bird.

Why, after 18 years of teaching in the public schools, did you decide to move into higher education?

When I began working on my doctorate, I had no intention of leaving public education. I loved teaching high school and still miss those students every day.

But teaching in the public schools is not conducive to professional development. I hate to say that, but ultimately I came to Furman because it is a wonderful university and because higher education treats educators as professionals.

One of the greatest benefits of being at Furman has been gaining a greater public voice through expanded opportunities to publish opinion pieces and editorials, to write for professional journals, to sign contracts for three books, and to serve as an advocate for education on radio and television. By joining the Furman faculty, I gained a professional credibility I never had as a high school English teacher.

I now have a stronger platform and a chance to influence current and future teachers. In those respects, I have the potential to have a greater impact. 🍇

Paul Thomas' latest book, a primer for teachers titled Teaching Writing, was scheduled to be published by Peter Lang in February.