

THE COLUMN

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Virginia's New Measure of High School Dropouts

New method yields larger numbers: understanding why

MICHAEL A. SPAR

In March 2009, the Virginia Department of Education (VDOE) issued its annual high school dropout statistics for the state, each school division, and each high school.

This year's report is notable for more than its statistical data: the VDOE report identifies, for the first time, the number of dropouts from a *cohort* (in this case, the class of students who began the ninth grade in 2004), rather than the total number of students dropping out in one year. Cohort dropout statistics were made available by a number of different student characteristics, including gender, race, ethnicity, and English-language ability.

This new way of calculating the dropout rate, when compared with the traditional method, makes it appear that the dropout rate has suddenly taken a turn for the worse—and that is not the case. The new cohort dropout rates, however, provide the first picture of how many students from a single class of students drop out before graduating.

This article attempts to explain the new cohort dropout rate and why Virginia is changing the way it calculates this statistic.

NATIONAL AND STATE TRENDS IN EDUCATION ACCOUNTABILITY

State and national efforts to improve school effectiveness, as measured by graduation and dropout rates, have gained significant momentum in the past ten years. The No Child Left Behind (NCLB) legislation, passed by Congress in 2001, required states to show adequate yearly progress in a number of different areas, including dropouts and graduates. The initial legislation did not specify

the adoption of a particular type of graduation or dropout rate. However, when Title 1 of the Act was reauthorized in 2008, states were required to use the same method to calculate a cohort graduation rate.

Between the time of the NCLB Act being signed into law in 2002 and its reauthorization in 2008, the National Governors Association laid the groundwork for developing both cohort graduation and dropout rates. All fifty governors signed the Association's Graduation Rate Compact, which committed the governors to establishing student-based data management systems within their states and implementing a common and consistent method for measuring on-time high school graduation rates.

In July 2007, Representative Bobby Scott (D-VA 3rd District) introduced the Every Student Counts Act (H.R. 2955), a bill "to improve the calculation, reporting, and accountability for graduation rates." The Act addresses the fact that, despite the National Governors Association Compact, only 16 states had (in 2007) the required longitudinal data system necessary to calculate the recommended on-time graduation rate.

The 2007 Virginia General Assembly directed the Board of Education to study high school dropout and graduation rates and recommend appropriate changes to increase the high school graduation rates of student populations with high dropout rates.

The Board of Education and the VDOE submitted their report in October 2007, noting that national experts recommended that state departments of education report *cohort* dropout rates for each group of students who enter the ninth grade. This calculation requires four years of student-level data, which were available for Virginia's public school students for the first time in the fall of 2008.

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The VDOE released the first set of on-time cohort *graduation* rates in late 2008. The initial set of cohort *dropout* rates was released in March 2009.

COHORT AND SINGLE-YEAR DROPOUT RATES

Understanding the difference between single-year and cohort dropout rates requires understanding two concepts: dropouts and cohorts.

Who is a dropout?

The VDOE defines a dropout as a student who

1. was enrolled in school at some time during the previous school year; and
2. was not enrolled at the beginning of the current school year; and
3. did not graduate from high school or complete a state- or division-approved education program; and
4. did not meet any of the following exclusionary conditions:
 - a. transferred to another public school division, private school, or state/division-approved education program; or

WHY CHANGE THE WAY THE DROPOUT RATE IS CALCULATED?

There are several key reasons why Virginia is changing its method for computing dropout rates:

1. To measure dropout rates in a way that is consistent with the public’s perception of a dropout, that is, a student who enters high school as a freshman and leaves school before completing the requirements for graduation
2. To employ methods that tell the story of a group of students over four years of high school rather than take a snapshot of many grades of students in a single year (the old approach)
3. To use a consistent approach to measuring both dropout and graduation rates
4. To develop data that will allow direct comparisons between Virginia’s performance and that of other states and the nation

- b. left the country; or
- c. was temporarily absent due to illness, suspension, or enrollment in a school-approved alternate education program; or
- d. died.

This definition conforms to guidelines from the National Center for Education Statistics and is used throughout the United States. *Both single-year and cohort dropout rates use this definition of a dropout.*

What is a cohort?

A cohort is a group of individuals—students, for example—who experience the same significant demographic event (such as beginning the ninth grade) during a specified brief period of time and who may be identified as a group at successive later dates, such as graduation day, on the basis of this common demographic experience.

Single-year dropout rate

This rate is defined as the total number of dropouts (adding up the dropouts from grades 7–12) in the school year, divided by total student membership in grades 7–12 in the same year, as shown below:

$$\text{Single-year dropout rate} = \left[\frac{\text{number of dropouts in grades 7–12 during year}}{\text{total membership in grades 7–12 for the same year}} \right] \times 100$$

Cohort dropout rate

This rate is defined as the number of dropouts from a cohort of students over the four years they are in high school. The number of dropouts from this cohort as it moves from the 9th through the 12th grade is added together and becomes the numerator of the equation. The total number of dropouts from this group over four years is divided by the total number of students starting the ninth grade, with adjustments to add in the number of students who transfer *into* the cohort after the ninth grade, and subtracting the number of students who transfer *out* of the cohort or die:

$$\text{Cohort dropout rate} = \left[\frac{\text{number of dropouts in 4 years from the cohort}}{\text{number of first-time 9th grade students at the beginning of the cohort} + \text{in-transfers over 4 years} - \text{out-transfers over 4 years} - \text{deaths over 4 years}} \right] \times 100$$

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**VIRGINIA
INSTITUTE OF
GOVERNMENT**

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**WELDON COOPER
CENTER FOR PUBLIC SERVICE**
University of Virginia

VIRGINIA INSTITUTE OF GOVERNMENT TRAINING PROGRAMS

WEDNESDAY SERIES—Fall 2009

In partnership with Chesterfield County

Classes are held at UVa's Richmond Center from 8:30 am to 3:30 pm. Registration fee: \$100 per person. Lunch and materials included. Discount: for every three registrants from the same organization, the fourth person can attend at no cost (all registrations must be submitted together for the same class).

Contact Jessica Smith at (804) 371-0202 or jessicasmith@virginia.edu, or visit www.VaInstituteofGovernment.org.

Conflict Management

SEPTEMBER 9, 2009

For supervisors, team leaders, managers or directors

AFTER COMPLETING THIS SEMINAR, YOU WILL BE ABLE TO

- identify potential sources of conflict
- describe multiple styles of conflict management
- analyze various supervisory skills used in effective conflict resolution
- develop skills through practice and group activities

It's Showtime! Delivering Effective Presentations

OCTOBER 14, 2009

For anyone whose job requires making formal presentations

THIS SEMINAR WILL HELP YOU TO

- identify the basics of Adult Learning Theory
- analyze your audience
- prepare a presentation outline and design appropriate handouts
- recognize the 10 deadly sins when making presentations
- look at the why and how of audio visual aids
- calm the butterflies and survive stressful situations

Love 'Em or Lose 'Em—Motivating & Retaining Employees

NOVEMBER 18, 2009

For supervisors, team leaders, managers or directors

THIS SEMINAR WILL HELP YOU TO

- examine the Maslow and Herzberg theories of motivation
- promote principles of motivation theories in the work environment by using the *Love 'Em or Lose 'Em* strategies
- look at examples of how today's companies have applied these techniques successfully
- explain the supervisor's role in motivating employees
- create action plans for applying motivational principles and strategies at the office

WELDON COOPER CENTER LEADERSHIP DEVELOPMENT PROGRAMS

If your locality is an Institute member, you may attend one of the Cooper Center's nationally recognized leadership programs at a 10 percent discount. All programs are held at the University of Virginia in Charlottesville.

SEI (Senior Executive Institute)

SEI is an annual, two-week residential program for senior local government managers.

SEI 2009 Schedule

July 19-31

SEI 2010 Schedule

July 18-30



**Senior
Executive
Institute**

Contact Melanie Gillies at 434/982-5512 or mbg4b@virginia.edu.

LEAD (Leading, Educating, and Developing program)

LEAD is a one-week residential program for department/division heads and senior staff.

LEAD remaining 2009 Schedule

August 23-28

October 11-16

November 8-13

2010 Schedule

January 31-February 5

March 7-12

April 11-17

August 22-27

September 19-24

November 7-12



Contact Carmie Rodriguez at 434/243-5031 or carmie@virginia.edu.

VIRGINIA INSTITUTE OF GOVERNMENT SERVICES

Kudos for EBIS

“Dollar for dollar, VIG is the best bargain we get for our money. Thanks for all your help during the year.”

CITY MANAGER

“This [response] is perfect. You’re a champ. If they all come in like this, I’ll be set.”

CITY MANAGER

“Thank you. You’re a one-stop shop.”

ASSISTANT TOWN MANAGER

“This is a great way to find best practices.”

PUBLIC COMMUNICATIONS COORDINATOR

“These examples and contacts will help my staff in an area where they have no experience.”

TOWN MANAGER

“We benefit [from the EBIS] all the time. Least we can do is reply when we think we can help.”

COUNTY ADMINISTRATOR

Email Broadcast Information System (EBIS)

Service picks up speed as economy slows down

These are some of the toughest times any of us in local government can remember: revenues are shrinking, programs are being eliminated, and employees are taking on added responsibilities.

One way of dealing with this crisis is to lean on each other for assistance. We should not spend time and energy “reinventing the wheel” when confronting a problem. If one assumes that “there is nothing new under the sun”—that a locality in Virginia has already dealt with a particular issue—it makes sense to seek out that locality and ask for guidance.

The Institute’s Email Broadcast Information Service (EBIS) does precisely that for administrators and staff. A call or email to our office starts the wheels in motion: we broadcast your question—anonously—statewide, and draw on the collective expertise of other local governments in the state. Simply put, the EBIS provides “Virginia information for Virginia local governments.”

Since the beginning of the year, we have seen a steady, sometimes heavy, flow of questions. The system relies on voluntary responses from Virginia localities. This collegial spirit helps make the Commonwealth a leading example of good government for the country. Without local government contributions of staff time and expertise, the EBIS would be of no value. Instead, it has grown steadily in popularity and effectiveness since its inception in 1997.



Access to the EBIS is unlimited to all member localities, and we encourage its use by all staff. The Institute stands ready to do what it can, particularly now when the challenge of maintaining services and maximizing staff productivity is at its highest. While the road may be rough, give us a chance to fill at least some of the (pot) holes in your information needs.

★ ★ ★

For more information, contact Tedd Povar at tep3e@virginia.edu or 804/371-0202.



Compensation Survey System (CSS)

System provides salary and benefit information 24/7

The Institute’s on-line Compensation Survey System (CSS) remains an important resource for its 127 subscribers. It allows participating localities to retrieve comparative salary and benefit information 24/7, sorted by position title and locality type and size.

Maintaining up-to-date salary and benefit information in the system is a key to its success. To that end, Institute staff has been working with the system developer, Technology Net, to encourage all subscribing localities to review and update their data.

Technology Net can save personnel time by providing two of the CSS data-management functions:

- uploading an entirely new set of data when provided in the appropriate format or
- making across-the-board cost-of-living adjustments to a locality’s current data

While we are pleased with the current level of participation in the CSS, we are always working to expand the system. Clearly, having additional subscribers equates to more data on the system, thus increasing the system’s value to all users.

★ ★ ★

If you are interested in accessing this valuable tool, please contact Tedd Povar at tep3e@virginia.edu or 804-371-0202.

“The publication of these cohort reports represents a milestone in the Commonwealth’s effort to account for every student. This is vital information that will shape efforts at the state and local levels to keep students in school and on track toward earning a diploma.”

PATRICIA I. WRIGHT
SUPERINTENDENT OF
PUBLIC INSTRUCTION
VIRGINIA DEPARTMENT OF EDUCATION

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COMPARING THE TWO APPROACHES

Why do the methods produce such different rates?

Both rates measure dropouts, but in different ways: The single-year rate is cross-sectional, measuring all dropouts (from all six grades) in one year. The cohort dropout rate is longitudinal, following one class from the ninth grade through the end of high school.

To calculate the dropout rate, the total number of students dropping out is divided by the total number of students in the population “eligible” to drop out—and this produces the large difference in the results. The denominator of the single-year dropout rate is the total membership of six grades, while the denominator for the cohort rate is the membership of one grade—the ninth grade—with adjustments for transfers and deaths. The single-year rate’s *larger* denominator produces a *smaller* dropout rate while the cohort rate’s numerically *smaller* denominator produces a *larger* dropout rate.

COMPARING RESULTS FOR THE TWO METHODS

The statewide *cohort* dropout rate was 8.7 percent, which means that for every 100 students starting the 9th grade in 2004, nine dropped out before the end of high school. The *single-year* dropout rate was 1.9 percent, which means that about two of every 100 students in grades 7–12 dropped out during the 2007–08 school year.

The table below shows cohort and single-year dropout rates for the state and for several large school divisions, as an example to illustrate the different values of the two rates.

School Division	Cohort Dropout Rate (%)	Single-Year Dropout Rate (%)
State of Virginia	8.7	1.9
Chesapeake	6.9	2.3
Chesterfield	11.7	2.4
Fairfax	5.6	1.5
Hampton	10.1	2.3
Henrico	7.8	2.5
Loudoun	3.3	0.7
Norfolk	13.0	3.9
Prince William	10.1	0.5
Virginia Beach	5.5	1.1

COHORT DROPOUT AND COHORT GRADUATION RATES

Cohort dropout and graduation rates are similar, in that they both involve tracking a group of high school students for four years. Even though they measure opposite educational results—graduates and dropouts—the two rates have the same denominator, which represents the initial class of first-time ninth grade students with suitable modifications for in- and out-transfers. There is a widespread misconception that adding the cohort dropout and on-time graduation rates together equals 100 percent of all students. There are two main reasons why this is not true and the two rates, when added together, will not equal 100 percent:

- The cohort graduation rate measures “on-time” graduation and only includes students who graduate in four or fewer years. Students who take longer than four years are excluded from the calculation; however, these students are not considered dropouts.
- The on-time graduation rate only includes students receiving a diploma. Students who earn a certificate of completion or receive a GED are excluded from the calculation; however, they are not considered dropouts.

CONCLUSION

Virginia’s new cohort dropout rate has several advantages over the single-year rate:

- The cohort dropout rate more accurately monitors students’ event history (in or out of school) by tracking individual student data throughout the four-year period.
- The cohort dropout rate is a more intuitive measure and more closely matches the public’s understanding of the term “dropouts.”
- The cohort dropout rate is consistent with the new on-time cohort graduation rate.



The author is a research associate in the Demographics & Workforce Section at UVa’s Cooper Center for Public Service. Contact him at 804/371-0202 or mas6g@virginia.edu. For an expanded version of this article, visit www.coopercenter.org/demographics/.

UPCOMING

WEDNESDAY SERIES
FALL 2009

See page 3 for details



Conflict Management
September 9, Richmond



**It's Showtime! Delivering
Effective Presentations**
October 14, Richmond



**Love 'Em or Lose 'Em—
Motivating &
Retaining Employees**
November 18, Richmond



To register:

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VIRGINIA INSTITUTE OF GOVERNMENT SERVICES

2009-10 Wallerstein
Scholarship Awarded

John Budesky is the recipient of the 2009-10 Wallerstein Scholarship. Mr. Budesky has been administrator of New Kent County since 2005. In fulfilling the terms of the Scholarship, he will develop a manual of "lessons learned" and "best practices" in local government management. The guide, to be based on personal interviews with managers throughout the state, will be available in both written and video formats.

The Wallerstein Scholarship is administered by the Weldon Cooper Center for Public Service and the Virginia Municipal League



Contact the Cooper Center at 804/371-0202
or wallerstein@virginia.edu.

Regional Meetings Held
to Discuss Dealing with
the Economy

In January, the Institute hosted five regional meetings for local government managers to discuss how they were handling their localities' fiscal challenges. A report is available from the Institute listing key issues and suggestions generated by the 75 officials who participated. For a copy of the report, contact Tedd Povar at tep3e@virginia.edu or 804/371-0202. Another set of discussions is planned for fall 2009.

