

Data use and its role in increasing graduation rates: Data and tools from the Virginia Department of Education

Dr. Deborah L. Jonas
Executive Director for Research and Strategic Planning
Virginia Department of Education



November 2009

How can data inform our work?

- Recent advances in technology and data availability make it possible to better predict who is at risk of dropping out.
- Research has identified factors most predictive of students dropping out of school (e.g., Allensworth & Easton, 2005; Neild & Balfanz, 2006).
- Using these data can provide schools and school divisions with diagnostic tools that:
 - Inform leaders about the specific challenges and the magnitude of those challenges at each school.
 - Match interventions to students based on challenges.
 - Inform the development of strategic plans to improve graduation rates.
- VDOE is using a multi-pronged approach to using data and analysis to support school divisions.
- As we collect more specific data, we can improve the data tools we offer to our schools.

Allensworth, E.M. & Easton, J. Q. (2005). The on-track indicator as a predictor of high school graduation. Chicago: Chicago, IL: Consortium on Chicago School Research.
Neild, R.C. & Balfanz, R. (2006). Unfulfilled promise: The dimensions and characteristics of Philadelphia's dropout crisis, 2000-2005. Philadelphia Youth Network, The Johns Hopkins University, and the University of Pennsylvania.

November 2009

Multi-pronged approach to data use

Multi-pronged approach to data use

- Comprehensive reporting of cohort graduates, dropouts, students who complete school, and those who stay in school.
- Provide reports to educators via secure education data warehouse using available data.
- Build data tools that divisions and schools can use as part of their improvement process.

de

2011-2012

November 2009

Comprehensive reporting

The Cohort Report and information available regarding students progress through high school

Results from Virginia's Cohort Report 2009

Subgroup	% Graduated	% GED	% Certificate	% Still Enrolled	% Dropout	% long-term leave of absence	% unconfirmed
All Students	83.22%	3.64%	0.33%	2.68%	7.93%	0.45%	1.76%
Female	86.40%	2.81%	0.35%	2.13%	6.50%	0.41%	1.40%
Male	80.15%	4.44%	0.32%	3.21%	9.31%	0.49%	2.10%
Black	75.89%	3.36%	0.58%	4.82%	11.26%	0.90%	3.40%
Hispanic	72.28%	3.07%	0.69%	2.89%	19.14%	0.28%	1.64%
White	87.01%	4.03%	0.19%	1.78%	5.55%	0.29%	1.16%
Asian	93.30%	1.31%	0.18%	1.47%	3.31%	0.10%	0.32%
American Indian	78.41%	5.98%	0%	3.65%	9.30%	1.33%	1.33%
Native Hawaiian	83.15%	4.49%	0%	3.37%	6.74%	0%	2.25%
Other	91.11%	2.02%	0.24%	1.84%	4.05%	0.19%	0.56%
Students with Disabilities	82.49%	3.81%	0.66%	n/a	12.46%	0.01%	0.55%
Students with Disabilities anytime	79.45%	4.23%	0.60%	0.01%	15.19%	0.01%	0.51%
Economically Disadvantaged	73.19%	5.50%	0.66%	4.61%	11.95%	0.81%	3.28%
Economically Disadvantaged anytime	70.87%	5.53%	0.62%	4.61%	14.59%	0.86%	2.91%
Limited English Proficient	68.78%	1.63%	1.58%	n/a	26.12%	0.08%	0.82%
Limited English Proficient anytime	74.86%	1.97%	1.13%	0.66%	20.79%	0.05%	0.55%
Migrant	66.87%	6.67%	6.67%	0%	20%	0%	0%
Migrant anytime	60.53%	3.95%	6.58%	0%	28.95%	0%	0%
Homeless	66.61%	4.77%	1.19%	5.28%	17.89%	1.19%	3.07%
Homeless anytime	62.01%	5.38%	0.79%	6.59%	21.22%	1.29%	2.72%

de

2011-2012

November 2009

More information is available for students in the cohort

- Detailed cohort reports available to the public show the numbers (rather than percents), including number of students earning each diploma type.
 - Detailed reports are prepared at the state, division, and school level.
 - Available publicly at: http://www.doe.virginia.gov/VDOE/src/ontime_grad_rate.shtml
- Secure tools provide authorized users to access to the detailed data that led to the reported data.
 - Complete list of students in the cohort, and their most recent status.
 - Status of students in future cohorts (e.g., class of 2010, 2011, 2012, and 2013).
 - Details of cell sizes less than 10.
 - Updated status of students in previously reported cohorts (can be used to review outcomes of students still enrolled in school).

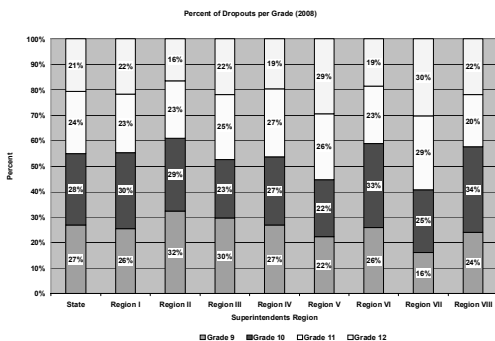
48

November 2009

Use Existing Data

Outcomes of Virginia's students on factors associated with dropout

Students drop out in all grade levels



Retentions in student cohorts

Cohort year	Dropouts	Non-dropouts
<i>Retained anytime in high school</i>		
2009	45%	12%
2008	59%	12%
<i>Retained in ninth grade</i>		
2009	36%	9%
2008	38%	6%

48

November 2009

Age at high school exit

Percent of students in cohorts who were two or more years overage for grade

Cohort year	Dropouts	Diploma earners
2009	70%	9%
2008	68%	8%

49

November 2009

Attendance

Cohort year	Dropouts	Non-dropouts
<i>Absent at least 80% of their last year of school</i>		
2009	65%	7%
2008	65%	7%
<i>Absent at least 80% one year before leaving high school</i>		
2009	35 %	4%
2008	29%	4%

50

November 2009

Statewide assessment and dropout

- Preliminary indicators:
 - Freshmen who failed the statewide reading assessment 2 years in a row are 38% more likely to drop out after controlling for other risk factors.
 - Freshmen who failed the statewide mathematics assessment 2 years in a row are 31% more likely to drop out after controlling for other risk factors.
 - High absenteeism is the most predictive factor that we have available for analysis.
- Over time, and as more data are collected, we will have more information about these relationships.

48

November 2009

November 2009

Postsecondary enrollment

Postsecondary enrollment	Year Graduated/Completed High School		
	2006	2007	2008
Enrolled within one year			
Percent enrolled			
4-year institution	38%	38%	37%
2-year institution	22%	24%	25%
Less than 2 year institution	< 1%	< 1%	< 1%
Total	60%	63%	62%
Enrolled anytime since high school completion			
4-year institution	40%	40%	37%
2-year institution	29%	28%	25%
Less than 2 year institution	< 1%	< 1%	< 1%
Total	69%	68%	62%

Preliminary analyses of data from the National Student Clearinghouse.
NOTE: Approximately 45 percent of students who enroll in Virginia's two-year colleges require developmental coursework.

49

November 2009

November 2009

Postsecondary enrollment* for 2006 and 2007 graduates and completers

Primary Disability Code	n	Four-year	Two-Year	Overall
No Disability	139,095	47.3%	34.9%	72.4%
Mental Retardation	2,154	1.1%	7.3%	8.4%
Severe Disability	105	1.9%	0.0%	1.9%
Multiple Disabilities	366	2.5%	15.6%	17.5%
Orthopedic Impairment	96	30.2%	40.6%	61.5%
Visual Impairment	62	27.4%	35.5%	59.7%
Hearing Impairment	188	22.9%	28.7%	46.8%
Specific Learning Disability	10,436	13.5%	34.2%	43.9%
Emotional Disturbance	1,958	8.3%	29.2%	34.8%
Speech or Language	286	30.8%	35.3%	58.7%
Other Health Impairment	3,173	13.1%	34.8%	43.6%
Deaf-Blindness	119	5.0%	42.0%	45.4%
Autism	303	9.9%	25.1%	32.7%
Traumatic Brain Injury	68	5.9%	22.1%	27.9%
Section 504	1,171	43.1%	43.1%	73.9%

*Analyses of VDOE data combined with data provided by the the National Student Clearinghouse.
NOTE: Approximately 45 percent of students who enroll in Virginia's two-year colleges require developmental coursework.

50

November 2009

November 2009

VDOE Data Tools in Development

Watch List Report for K-12

- Provides authorized users with information about students who may be at risk of not being successful in school.
- Information can be used to inform schoolwide decisions that impact student instruction and support services and help ensure that interventions are tailored to students' individual needs.
- Provides school and student level "flags" for:
 - Attendance
 - SOL performance
 - Students two or more years overage for grade
 - Students who were retained.
- Will be available to authorized users through Virginia's secure data warehouse.

Watch List Report

VIRGINIA EIMS

School Year: 2005-06

Organization	Reap School	Grade	Attendance	English-Reading	Math	# with 2 or More Yrs Overage	# with 1 or More Flags	# with No Math Tests
Charterfield County Public	Alberta Smith Elementary	04	1	0	0	0	1	0
Charterfield County Public	Henry Bridge Middle	06	17	1	0	0	27	1
Charterfield County Public	Henry Bridge Middle	07	0	2	0	0	17	2
Charterfield County Public	Henry Bridge Middle	08	31	1	18	18	49	1
Charterfield County Public	Behwood Elementary	K02	5	0	0	0	5	0
Charterfield County Public	Behwood Elementary	01	6	0	0	2	6	0
Charterfield County Public	Behwood Elementary	02	3	0	2	2	5	0
Charterfield County Public	Behwood Elementary	03	6	0	2	2	6	0
Charterfield County Public	Behwood Elementary	04	3	0	1	1	4	0
Charterfield County Public	Behwood Elementary	05	1	0	1	1	2	0
Charterfield County Public	Behwood Elementary	K02	7	0	0	0	7	0
Charterfield County Public	Behwood Elementary	01	7	0	0	0	7	0
Charterfield County Public	Behwood Elementary	02	5	0	1	1	6	0
Charterfield County Public	Behwood Elementary	03	5	0	2	2	7	0
Charterfield County Public	Behwood Elementary	04	2	0	3	3	5	0
Charterfield County Public	Behwood Elementary	05	6	0	0	0	11	0
Charterfield County Public	Belle View Elementary	03	0	1	0	0	0	1
Charterfield County Public	Belle View Elementary	04	0	0	3	3	0	0

Use data to inform practice

- Data on risk factors for dropout are a means to understanding the types of challenges that divisions, schools, and individual students face in achieving graduation goals.
- The next steps are to use the data to identify interventions aligned with areas of need.
- Research on risk factors and evidence-based programs shows important lessons learned about interventions programs (Hammond, Linton, Smink, & Drew, 2007):
 - Use multiple strategies to help assure program impact.
 - The strategies chosen to support at-risk students should be evidence-based, aligned with the risk factors they need to target, and grounded in best practices.
 - When practitioners adopt existing programs, research suggests the programs should be fully implemented and implemented as they were designed.
 - The likelihood of dropping out increases as the number of risk factors increases, and prevention strategies should take this into account and target as many risk factors as possible.
- Looking at data only provides a starting point!

Hammond, C., Linton, D., Smink, J. & Drew, S. (2007). Dropout risk factors and exemplary programs: A technical report. Clemson, SC: National Dropout Prevention Center, Communities In Schools, Inc.



© 2009

November 2009

Questions?

Deborah L. Jonas, Ph.D.
Executive Director for Research and Strategic Planning
Virginia Department of Education
Deborah.Jonas@doe.virginia.gov
804-225-2067



© 2009

November 2009
