

## Outcomes-Based, Value-Added Measurement of US Secretaries of Education

Secretary of Education	Term	Beginning	Ending	Improvement	Target	VAM	Rating	Ranking
Shirley Hufstedler	Nov. 1979-Jan. 1981	620.7	624	3.3	2.876388889	0.423611	Average	4th of 9
Terrel Bell	Jan 1981-Jan. 1985	618.7	623.1	4.4	2.876388889	1.523611	Superior	3rd of 9
William J. Bennett	Feb. 1985-Sept. 1988	623.9	625.8	1.9	2.876388889	-0.97639	Ineffective	5th of 9
Lauro Cavazos	Sept. 1988-Dec. 1990	633.7	623.6	-10.1	2.876388889	-12.9764	Ineffective	9th of 9
Lamar Alexander	Mar. 1991-Jan. 1993	628.9	635.2	6.3	2.876388889	3.423611	Superior	2nd of 9
Richard Riley	Jan. 1993-Jan. 2001	619.7	643.2	23.5	2.876388889	20.62361	Superior	1st of 9
Roderick Paige	Jan. 2001-Jan. 2005	619.7	620.5	0.8	2.876388889	-2.07639	Ineffective	6th of 9
Margaret Spellings	Jan. 2005-Jan. 2009	613.7	611.6	-2.1	2.876388889	-4.97639	Ineffective	7th of 9
Arne Duncan	Jan. 2009-present	621.4	619.1875	-2.2125	2.876388889	-5.08889	Ineffective	8th of 9

The "beginning," "ending," and "improvement" figures are aggregates of the following data points:

- 1 Teen employability (Seasonally-adjusted employment-population ratio, 16-19 years)
- 2 Teen pregnancy (Teen birth rate, ages 15-19)
- 3 Math scores (NAEP, 13-year-olds, using most recent data before taking office and most recent data after leaving office)
- 4 Reading scores (NAEP, 13-year-olds, using most recent data before taking office and most recent data after leaving office)

Notes:

"Pregnancy beginning" & "pregnancy ending" from next page are reversed in "beginning" and "ending" aggregates above because increase in that data is negative not positive.

All secretaries who do not show a positive VAM are rated "Ineffective."

Distribution	(range: -12.9764 to 20.62361)
Superior	1.523611 to 20.62361
Average	negative 2.07639 to 1.523610
Inferior	negative 12.9764 to negative 2.07638
Ineffective	anything below 0

	Employability beg.	Emp end	emp imp	preg beg	preg end	preg imp	math beg	math end
Shirley Hufstedler	48.5	45.7	-2.8	52.3	52.2	0.1	264	269
Terrel Bell	45.7	44.9	-0.8	52.2	51	1.2	264	269
William J. Bennett	44.9	47.8	2.9	51	53	-2	269	270
Lauro Cavazos	47.8	43.6	-4.2	53	59.9	-6.9	269	270
Lamar Alexander	42.9	41.4	-1.5	61.8	59	2.8	270	274
Richard Riley	41.4	44.2	2.9	59	45.3	13.7	273	281
Roderick Paige	44.2	36.2	-8	45.3	40.5	4.8	276	279
Margaret Spellings	36.2	30.1	-6.1	40.5	41.5	-1	279	281
Arne Duncan	30.1	26.3	-3.8	51.8875	50.3	1.5875	281	281

**-2.37777778**

**1.5875**

math imp	rdg beg	rdg end	rdg imp	TOTAL IMPROVEMENT
5	256	257	1	3.3
5	258	257	-1	4.4
1	257	257	0	1.9
1	257	257	0	-10.1
4	257	258	1	6.3
8	260	259	-1	23.6
3	259	260	1	0.8
2	257	260	3	-2.1
0	260	260	0	-2.2125
<b>3.22222222</b>			<b>0.44444444</b>	<b>2.87638889</b>

\*Teen birth data for 2009 and later was unavailable. As a result, Spellings was assigned the latest data available for her ending figure, which was 2008.

\*\*As teen birth data for Duncan's tenure was unavailable, he was assigned the average data of all other Secretaries.

\*\*\*There is no NAEP data later than 2008; as a result, Duncan and Spellings were assigned the latest available data for their post-2008 data.

Methodology: The value-added rank and score of each US secretary of education was derived using the following methodology:

1. "Quality-of-teen-life" and NAEP statistics were gathered prior to the beginning and after the end of each of their terms.
2. The rate of improvement (number of points, positive or negative, between beginning point and end point) was calculated for each secretary.
3. The average rate of improvement across all secretaries and all data points was established as the Target Rate of Improvement.
4. Failure to attain the Target was deemed a failure to add value.

**Sources**

- Data point 1 Bureau of Labor Statistics search; most recent period available for Duncan was Q4 2011
- Data point 2 [http://www.cdc.gov/nchs/data/databriefs/db58\\_tables.pdf#1](http://www.cdc.gov/nchs/data/databriefs/db58_tables.pdf#1);
- Data points 3 and 4 <http://nces.ed.gov/nationsreportcard/litdata/dataset.aspx>

