

Continuing a Value-Added Model with the Madison Metropolitan School District

**Preliminary - Do Not Circulate
December 17, 2010**

The Distribution of the WKCE in MMSD

Value added is measured in MMSD using points on the WKCE as a unit of measurement. For example, a value added of +3 for third grade math at a given school means that students at that school gained 3 more points on the mathematics WKCE than observationally similar students across MMSD between November of the third grade and November of the fourth grade.

The tables below present summary statistics about attainment on the WKCE in MMSD across students. These tables provide some context for interpreting results that use the WKCE scale. For example, consider again the case of a school with a value added of +3 for the third grade, where students gained 3 more WKCE points in mathematics between the third and fourth grade than similar students across the district. We can see that the 25th percentile across students on the fourth grade math WKCE is 439, while the 50th percentile on the fourth grade math WKCE is 470--a difference of 31 points. Therefore, a value added of +3 math WKCE points from third grade to fourth grade represents slightly more than a tenth of the difference between the 25th percentile and the 50th percentile on the fourth grade math WKCE.

Distribution of the WKCE in mathematics and reading across students in MMSD

WKCE in mathematics, November 2009

Grade	3	4	5	6	7	8
5th percentile	343	385	394	414	450	451
25th percentile	397	439	457	478	504	515
50th percentile	436	470	493	514	537	551
75th percentile	472	502	528	546	569	585
95th percentile	520	556	583	590	611	628
Mean	435	470	491	510	535	547
Standard deviation	58	54	59	56	51	56

WKCE in reading, November 2009

Grade	3	4	5	6	7	8
5th percentile	377	367	372	381	419	424
25th percentile	426	436	442	459	481	489
50th percentile	457	475	479	501	523	528
75th percentile	483	509	516	535	562	564
95th percentile	519	552	565	579	606	615
Mean	452	469	475	494	519	525
Standard deviation	50	59	60	62	60	61

Table 1. Elementary School Value Added

School	Math			Reading		
	VA	Std. Err.	N	VA	Std. Err.	N
300 Schenk Elementary						
Nov. 2005-Nov. 2007	-0.4	(1.2)	299	-1.9	(1.3)	298
Nov. 2006-Nov. 2008	-1.4	(1.2)	301	-1.6	(1.3)	302
Nov. 2007-Nov. 2009	-3.5	(1.2)	307	-0.9	(1.4)	306
Subgroups, 2007-09:						
Disability	-1.2	(3.0)	38	-3.8	(2.9)	38
ELL	*	*	51	-2.2	(1.9)	49
Black	*	*	82	0.2	(1.9)	83
Hispanic	-3.4	(1.5)	39	-0.9	(1.5)	37
Low-income	*	*	182	-0.8	(1.5)	181
735 Shorewood Hills Elementary						
Nov. 2005-Nov. 2007	4.9	(1.2)	330	3.0	(1.3)	323
Nov. 2006-Nov. 2008	5.1	(1.2)	304	4.6	(1.4)	292
Nov. 2007-Nov. 2009	3.5	(1.3)	289	4.1	(1.4)	282
Subgroups, 2007-09:						
Disability	4.1	(3.1)	34	5.6	(3.0)	34
ELL	*	*	70	4.9	(1.9)	62
Black	*	*	15	4.0	(2.4)	15
Hispanic	3.4	(1.6)	12	4.2	(1.6)	12
Low-income	*	*	57	4.7	(2.1)	55
270 Stephens Elementary						
Nov. 2005-Nov. 2007	0.2	(1.1)	410	-1.9	(1.1)	408
Nov. 2006-Nov. 2008	-0.3	(1.1)	419	-2.0	(1.2)	413
Nov. 2007-Nov. 2009	-1.9	(1.1)	392	-0.7	(1.2)	388
Subgroups, 2007-09:						
Disability	-6.9	(2.6)	57	-1.2	(2.7)	56
ELL	*	*	58	-0.6	(1.8)	55
Black	*	*	51	0.1	(2.0)	51
Hispanic	-2.4	(1.5)	25	-0.7	(1.4)	25
Low-income	*	*	94	-0.4	(1.8)	93
780 Thoreau Elementary						
Nov. 2005-Nov. 2007	0.4	(1.2)	335	-0.5	(1.2)	336
Nov. 2006-Nov. 2008	-0.3	(1.2)	331	0.7	(1.3)	331
Nov. 2007-Nov. 2009	-0.9	(1.2)	339	0.3	(1.3)	339
Subgroups, 2007-09:						
Disability	-1.4	(2.8)	48	-3.5	(2.8)	48
ELL	*	*	41	0.4	(1.9)	41
Black	*	*	81	-1.0	(1.9)	81
Hispanic	-1.0	(1.5)	35	0.3	(1.4)	35
Low-income	*	*	152	-1.4	(1.6)	152

Table 1. Elementary School Value Added

School	Math			Reading		
	VA	Std. Err.	N	VA	Std. Err.	N
795 Van Hise Elementary						
Nov. 2005-Nov. 2007	-2.7	(1.3)	244	-1.1	(1.4)	243
Nov. 2006-Nov. 2008	0.6	(1.3)	268	-2.4	(1.4)	267
Nov. 2007-Nov. 2009	2.6	(1.2)	315	0.1	(1.3)	315
Subgroups, 2007-09:						
Disability	2.5	(3.2)	27	-2.1	(3.2)	27
ELL	*	*	47	0.6	(1.9)	47
Black	*	*	21	-0.4	(2.3)	21
Hispanic	2.6	(1.6)	14	0.2	(1.5)	14
Low-income	*	*	60	0.2	(2.0)	60

Table 2. Middle School Value Added

School	Math			Reading		
	VA	Std. Err.	N	VA	Std. Err.	N
690 Black Hawk Middle						
Nov. 2005-Nov. 2007	-0.9	(0.8)	439	-1.1	(0.8)	443
Nov. 2006-Nov. 2008	0.3	(0.8)	429	1.2	(1.0)	427
Nov. 2007-Nov. 2009	2.8	(1.0)	446	0.0	(0.9)	444
Subgroups, 2007-09:						
Disability	0.2	(2.3)	82	-4.8	(2.1)	82
ELL	4.8	(2.1)	94	0.8	(1.6)	92
Black	2.6	(1.8)	91	-0.2	(1.6)	90
Hispanic	4.0	(2.6)	53	0.0	(1.4)	52
Low-income	3.3	(1.3)	229	*	*	227
90 Cherokee Heights Middle						
Nov. 2005-Nov. 2007	1.3	(0.8)	552	-0.7	(0.8)	568
Nov. 2006-Nov. 2008	0.3	(0.7)	658	-1.0	(0.8)	658
Nov. 2007-Nov. 2009	-0.3	(0.8)	680	-1.6	(0.8)	673
Subgroups, 2007-09:						
Disability	6.7	(2.1)	107	-0.9	(1.9)	107
ELL	-4.6	(1.7)	150	-1.5	(1.5)	143
Black	2.1	(1.5)	149	-3.0	(1.4)	148
Hispanic	-5.6	(1.8)	129	-1.9	(1.2)	123
Low-income	-0.2	(1.1)	325	*	*	320
810 Hamilton Middle						
Nov. 2005-Nov. 2007	0.0	(0.6)	872	0.5	(0.7)	872
Nov. 2006-Nov. 2008	-0.1	(0.6)	922	2.1	(0.8)	916
Nov. 2007-Nov. 2009	-0.8	(0.8)	906	1.8	(0.8)	902
Subgroups, 2007-09:						
Disability	-5.0	(2.3)	84	3.1	(2.1)	84
ELL	1.1	(2.3)	78	0.6	(1.7)	73
Black	-2.8	(2.1)	49	3.7	(1.9)	49
Hispanic	-1.1	(3.0)	36	1.3	(1.4)	37
Low-income	-2.0	(1.5)	137	*	*	137
440 James Wright Middle						
Nov. 2005-Nov. 2007	0.5	(0.9)	295	1.0	(0.9)	294
Nov. 2006-Nov. 2008	-0.1	(0.8)	322	0.2	(1.1)	309
Nov. 2007-Nov. 2009	-2.0	(1.2)	315	-0.7	(1.0)	308
Subgroups, 2007-09:						
Disability	-1.3	(2.4)	73	0.1	(2.2)	66
ELL	-4.4	(1.8)	123	-0.4	(1.4)	123
Black	-1.2	(1.7)	105	-1.1	(1.5)	102
Hispanic	-3.9	(2.0)	103	-0.2	(1.3)	103
Low-income	-1.7	(1.2)	265	*	*	260

Table 2. Middle School Value Added

School	Math			Reading		
	VA	Std. Err.	N	VA	Std. Err.	N
370 Jefferson Middle						
Nov. 2005-Nov. 2007	-0.3	(0.8)	528	-0.7	(0.8)	534
Nov. 2006-Nov. 2008	-0.8	(0.7)	498	0.4	(0.9)	497
Nov. 2007-Nov. 2009	-0.4	(0.9)	540	1.1	(0.9)	537
Subgroups, 2007-09:						
Disability	0.8	(2.5)	69	-1.3	(2.2)	69
ELL	-0.1	(2.4)	60	2.2	(1.8)	57
Black	-1.0	(2.0)	60	0.5	(1.8)	60
Hispanic	-1.8	(3.0)	37	1.1	(1.5)	37
Low-income	-1.2	(1.6)	127	*	*	126
540 O'Keefe Middle						
Nov. 2005-Nov. 2007	1.5	(0.8)	460	0.6	(0.8)	460
Nov. 2006-Nov. 2008	0.9	(0.7)	507	-1.7	(0.9)	506
Nov. 2007-Nov. 2009	1.8	(0.9)	527	0.5	(0.9)	526
Subgroups, 2007-09:						
Disability	-5.9	(2.2)	90	1.6	(2.0)	90
ELL	-3.0	(2.5)	54	-1.3	(1.8)	53
Black	0.8	(1.8)	84	2.0	(1.7)	83
Hispanic	-2.1	(2.8)	41	0.3	(1.4)	41
Low-income	-0.7	(1.3)	202	*	*	201
665 Sennett Middle						
Nov. 2005-Nov. 2007	-0.2	(0.7)	704	0.9	(0.7)	713
Nov. 2006-Nov. 2008	-1.4	(0.7)	750	-1.3	(0.8)	744
Nov. 2007-Nov. 2009	0.7	(0.8)	765	-1.5	(0.8)	761
Subgroups, 2007-09:						
Disability	-2.1	(1.7)	152	0.4	(1.7)	151
ELL	4.4	(1.6)	167	-0.9	(1.4)	166
Black	-1.6	(1.6)	137	-1.5	(1.5)	135
Hispanic	5.0	(1.7)	150	-1.0	(1.2)	149
Low-income	0.7	(1.0)	374	*	*	370
710 Sherman Middle						
Nov. 2005-Nov. 2007	-0.6	(0.7)	588	-0.2	(0.8)	594
Nov. 2006-Nov. 2008	0.1	(0.7)	519	0.7	(0.9)	517
Nov. 2007-Nov. 2009	1.3	(1.0)	460	0.7	(0.9)	459
Subgroups, 2007-09:						
Disability	3.4	(2.4)	75	-0.2	(2.2)	75
ELL	0.6	(1.8)	130	0.1	(1.5)	130
Black	2.3	(1.6)	134	1.3	(1.5)	133
Hispanic	3.2	(2.3)	74	0.7	(1.4)	74
Low-income	1.6	(1.2)	285	*	*	285

