

Erasure Analysis

The erasure analysis for NJ ASK grades 5 through 8 revealed a total of 1,201,593 erasures. Quality control checks and verification procedures were implemented to ensure that reported erasures are valid. As an additional safeguard, anonymity of DFGs, districts, schools, and teachers was preserved by randomly assigning identification numbers to these groups. Thus, the identity of a give district, school, or teacher cannot be determined within these data.

Of these 1,201,593 erasures, 57.96% of the erasures involved changing an incorrect response to a correct response. Table 1 shows the total erasures and percentage of each type of change by grade.

Table 1: Erasures by Grade

Grade	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong To Wrong
5	263087	59.84	14.83	25.33
6	239683	58.12	15.81	26.07
7	245102	58.22	17.25	24.52
8	453721	56.64	18.65	24.72
Total	1,201,593	57.96	16.96	25.08

Table 2 shows the total erasures and percentage of each change by subject.

Table 2: Erasures by Subject

Subject	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong To Wrong
LAL	504440	60.66	17.18	22.16
Math	497670	57.84	14.76	27.40
Science	199483	51.43	21.90	26.67
Total	1,201,593	57.96	16.96	25.08

Table 3 shows the total erasures and percentage of erasures going from wrong to right by DFG. Wrong to right erasure rates greater than 25% above the statewide erasure rate are classified as high erasure rates for the purposes of this investigation. None of the wrong to right erasure rates by DFG are classified as high.

Table 3: Wrong to Right Erasure Rates by DFG

DFG	Total Erasures	% Wrong To Right	Difference from Statewide Rate	High Erasure Rate
3	705	33.62	-24.34	No
5	4092	48.14	-9.82	No
9	231980	50.68	-7.28	No
2	124907	53.22	-4.74	No
10	18474	53.84	-4.12	No
6	113777	55.82	-2.14	No
12	151021	58.37	0.41	No
4	141964	60.05	2.09	No
11	152791	61.24	3.28	No
8	212695	64.19	6.24	No
1	260	67.31	9.35	No
7	48927	67.52	9.56	No
Total	1,201,593	57.96	0	No

When analyzed by district, 11 of the 566 districts included in these analyses displayed wrong to right erasure rates at a high level as defined above. These 11 districts are presented in Table 4. Analyses by teacher were not conducted as a single teacher name was given for all schools in a given district.

Table 4: High Wrong to Right Erasure Rates by District

District	Total Erasures	% Wrong To Right	Difference from Statewide Rate	High Erasure Rate
394	291	72.51	14.55	Yes
204	211	72.51	14.55	Yes
262	124	72.58	14.62	Yes
28	2117	72.79	14.83	Yes
348	605	73.22	15.26	Yes
119	61	73.77	15.81	Yes
57	149	73.83	15.87	Yes
166	180	73.89	15.93	Yes
235	182	74.18	16.22	Yes
257	31	74.19	16.23	Yes
550	58	77.59	19.63	Yes

At the school level, 61 of the 1596 schools demonstrated high wrong to right erasure rates. The 15 schools with the highest erasure rates are presented in Table 5. Three schools have wrong to right erasure rates for greater than 88% (more than 50% greater

than the statewide rate). These schools, however, had very few erasures, thus these values are not unreasonable.

Table 5: High Wrong to Right Erasure Rates by School

School	Total Erasures	% Wrong To Right	Difference from Statewide Rate	High Erasure Rate
827	156	76.92%	18.96%	Yes
1282	123	77.24%	19.28%	Yes
89	58	77.59%	19.63%	Yes
1093	403	78.41%	20.45%	Yes
180	146	79.45%	21.49%	Yes
1505	149	79.87%	21.91%	Yes
937	406	80.30%	22.34%	Yes
1100	210	81.43%	23.47%	Yes
1165	11	81.82%	23.86%	Yes
1521	568	82.75%	24.79%	Yes
950	45	84.44%	26.49%	Yes
36	911	85.51%	27.55%	Yes
65	9	88.89%	30.93%	Yes
94	1	100.00%	42.04%	Yes
991	3	100.00%	42.04%	Yes

With no previous data for comparison and in some cases low numbers of erasures most schools do not require further investigation. School #36 is the exception. With 911 erasures and a wrong to right erasure rate of 85.5%, this school warrants a closer examination.

Further analysis reveals that school #36 is in district #422 with teacher # 245238. At grade 5, 745 of the 911 erasures occurred on the language arts literacy (LAL) test. The LAL consisted of 52 items including opened end and field test items. Erasures occurred on every multiple choice item from 1 to 40. No erasures were detected on LAL items 41 through 52 (the field test section). Moreover, there were approximately 21 erasures on each LAL item compared with only about 4 erasures per item on the math test as shown in Table 6.

Table 6: Erasures by Subject at School #36

LAL Item	Frequency	Cumulative Frequency	Math Item	Frequency	Cumulative Frequency
LQ01	23	23	MQ09	8	8
LQ02	21	44	MQ10	3	11
LQ03	19	63	MQ11	10	21
LQ04	14	77	MQ12	3	24
LQ05	29	106	MQ13	6	30
LQ06	13	119	MQ14	8	38
LQ07	14	133	MQ15	8	46
LQ08	10	143	MQ16	11	57
LQ09	9	152	MQ17	1	58
LQ10	13	165	MQ18	3	61
LQ13	22	187	MQ19	2	63
LQ14	27	214	MQ20	4	67
LQ15	25	239	MQ23	1	68
LQ16	32	271	MQ24	4	72
LQ17	13	284	MQ25	5	77
LQ18	20	304	MQ26	10	87
LQ19	30	334	MQ27	1	88
LQ20	22	356	MQ28	5	93
LQ22	26	382	MQ29	2	95
LQ23	36	418	MQ30	5	100
LQ24	23	441	MQ31	5	105
LQ25	19	460	MQ34	2	107
LQ26	23	483	MQ35	4	111
LQ27	10	493	MQ36	5	116
LQ28	22	515	MQ37	2	118
LQ29	20	535	MQ38	5	123
LQ31	26	561	MQ39	6	129
LQ32	29	590	MQ40	7	136
LQ33	19	609	MQ41	1	137
LQ34	22	631	MQ42	3	140
LQ35	21	652	MQ43	1	141
LQ36	29	681	MQ45	1	142
LQ37	23	704	MQ46	2	144
LQ38	17	721	MQ47	4	148
LQ39	13	734	MQ48	3	151
LQ40	11	745	MQ49	3	154
			MQ50	2	156
			MQ51	2	158
			MQ52	3	161
			MQ53	3	164
			MQ54	2	166

At school #36, the overall wrong to right erasure rate of 85.5% increases to 93.83% for LAL alone while the rate decreases to 48.19% when math is analyzed alone. Table 7 shows the wrong to right counts by item for both LAL and math.

Table 7: Wrong to Right Erasure Counts by Subject at School #36

LAL Item	Frequency	Cumulative Frequency	Math Item	Frequency	Cumulative Frequency
LQ01	22	22	MQ09	7	7
LQ02	20	42	MQ10	3	10
LQ03	17	59	MQ11	3	13
LQ04	12	71	MQ13	5	18
LQ05	28	99	MQ14	5	23
LQ06	13	112	MQ18	3	26
LQ07	14	126	MQ23	1	27
LQ08	10	136	MQ24	4	31
LQ09	7	143	MQ25	3	34
LQ10	13	156	MQ26	1	35
LQ13	21	177	MQ27	1	36
LQ14	25	202	MQ28	4	40
LQ15	24	226	MQ29	1	41
LQ16	31	257	MQ30	3	44
LQ17	13	270	MQ31	1	45
LQ18	18	288	MQ34	2	47
LQ19	28	316	MQ35	2	49
LQ20	20	336	MQ36	3	52
LQ22	26	362	MQ37	1	53
LQ23	33	395	MQ38	3	56
LQ24	15	410	MQ39	4	60
LQ25	18	428	MQ40	4	64
LQ26	20	448	MQ41	1	65
LQ27	10	458	MQ42	2	67
LQ28	22	480	MQ46	1	68
LQ29	19	499	MQ47	4	72
LQ31	26	525	MQ48	2	74
LQ32	29	554	MQ50	2	76
LQ33	19	573	MQ52	2	78
LQ34	22	595	MQ53	1	79
LQ35	20	615	MQ54	1	80
LQ36	26	641			
LQ37	22	663			
LQ38	16	679			
LQ39	11	690			
LQ40	9	699			

Additional analyses were conducted on the district (# 422) to which school #36 belongs and the teacher name (#245238) associated with the tests administered at school #36. No additional anomalies were detected.