

Grade Configuration and N-Count Analysis Summary (2019 data)

During the special called Local Superintendent Advisory Council (LSAC) meeting on Dec. 1, 2020, members discussed proposed amendments to 703 KAR 5:270, Kentucky's Accountability System. One topic of discussion was the minimum n-count for inclusion in accountability. Under the *Every Student Succeeds Act* (ESSA), states are responsible for setting the minimum number of students needed to form a student demographic group for federal accountability and reporting purposes.

The proposal under consideration is to change the minimum n-count from 10 students per grade to 30 students per school. This modification could impact schools at all levels (elementary, middle and high). In order to make a more informed recommendation to the Kentucky Board of Education (KBE), members of LSAC requested additional information.

Using data from 2018-2019, the last time accountability was reported, the impact of the change was examined. Below is a summary of the analysis and impact to the indicators of Proficiency and Separate Academic. Data tables are located below the summary.

School Configurations

- There are a variety of grade configurations across Kentucky school districts. Below is a summary of the most common building configurations by level.
 - Elementary Schools: K-5 (63%), K-6 (15%) and K-8 (10%)
 - Middle Schools: 6-8 (54%), K-8 (21%) and 7-8 (8%)
 - High Schools: 9-12 (83%), 7-12 (6%) and K-12 (6%)
- Kentucky's accountability system is level based (elementary, middle or high school). Elementary includes any configuration of grades K-5 or K-6, middle includes any configuration of grades 5-8 or 6-8 and high includes any configuration of grades 9-12. Schools that contain 2 or 3 different levels receive separate ratings for each level. Below is a summary of the most common accountability configurations by level.
 - Elementary Schools: K-5 (80%), K-6 (15%)
 - Middle Schools: 6-8 (83%), 7-8 (12%)
 - High Schools: 9-12 (100%)

Impact of Change to 30 Students per School on Proficiency Indicator (Reading and Mathematics)

- For all schools, the change from 10 students per grade to 30 students per school results in minor impact to the schools with accountable populations. The largest difference is the percent of schools with the disability population. The percent of all schools that have a special education group slightly increases from 46.7% to 51.1%.
- For elementary schools, there are small increases across the groups. The largest increase is in the percent of schools with the disability population. The percent of elementary schools with the disability population increases from 33.0% to 57.0%.
 - The 32 elementary schools with 1 or 2 accountable grades have only decreases in the number of groups included in accountability.

- The 566 elementary schools with 3 accountable grades have increases in the number of groups included in accountability. Of the impact to student demographic groups, the largest impact is on the number of special education student groups in accountability. The percent of schools with the disability population increases from 33.4% to 56.2%.
- The 109 elementary schools with 4 accountable grades have increases across all groups with the largest increase is the percent of schools with the disability population. The percent of schools with the disability population increases from 16.5% to 63.3%.
- For middle schools, there are small increases across the groups. The largest increase in the percent of schools with the two or more races population. The percent of middle schools with the two or more races increases from 20.0% to 30.2%.
 - The 45 middle schools with 1 or 2 accountable grades have only decreases across groups with changes.
 - The 264 middle schools with 3 accountable grades have increases across all groups. The largest increase is the percent of schools with the disability population. The percent of schools with the disability population increases from 18.6% to 32.7%.
 - The 10 middle schools with 4 accountable grades have only increases across the groups with changes.
- For high schools, there are large decreases across all groups. The largest decreases are in the percent of schools with the disability population. The percent of high schools with the disability population decreases from 69.6% to 15.0% and the Hispanic population from 48.1% to 15.3%.

Impact of Change to 30 Students per School on Separate Academic Indicator (Science, Social Studies and Writing)

- For all schools, the change from 10 per grade to 30 per school results in decreases in the schools with accountable populations for all groups. The largest decreases are in the percent of schools with the disability population. The percent of schools with the disability population decreases from 51.1% to 25.9% and the Hispanic population from 26.5% to 15.2%.
- For elementary schools, there are decreases in the schools with accountable populations for all groups. The largest decrease is in the percent of schools with the disability population from 40.0% to 16.9%.
- For middle schools, there are decreases in the schools with accountable populations for all groups. The largest decrease is in the percent of schools with the Hispanic population from 35.9% to 27.2%.
- For high schools, there are large decreases in number of student groups in accountability. The largest decrease is in the percent of schools with the disability population. The percent of high schools with special education groups in accountability falls from 70.0% to 14.5% and the Hispanic population from 47.8% to 15.6%.

Table 1

Grade Ranges for All School Buildings							
Grade(s)	No Accountability Grades	Number of Elementary Schools	Percent of Elementary Schools	Number of Middle Schools	Percent of Middle Schools	Number of High Schools	Percent of High Schools
00	8						
00-01	4						
00-02	14						
00-03		8	1.1				
00-04		14	2				
00-05		445	62.9				
00-06		107	15.1				
00-08		68	9.6	68	21.3		
00-12		14	2	14	4.4	14	6.1
01-02	1						
01-03		1	0.1				
01-04		1	0.1				
01-05		21	3				
02-04		1	0.1				
02-05		2	0.3				
03-04		1	0.1				
03-05		12	1.7				
03-06		2	0.3				
04-05		3	0.4				
04-06		4	0.6				
04-08		2	0.3	2	0.6		
05		1	0.1				
05-06				2	0.6		
05-08				9	2.8		
05-12				1	0.3	1	0.4
06				2	0.6		
06-07				1	0.3		
06-08				172	53.9		
06-12				8	2.5	8	3.5
07-08				25	7.8		
07-12				14	4.4	14	6.1
08-09				1	0.3	1	0.4
09-12						190	83
10-12						1	0.4

Table 2

Grade Ranges for Accountability			
Grade	Level	Number of Schools	Percent of Schools
03	Elementary	9	1.3
03-04	Elementary	17	2.4
03-05	Elementary	562	79.5
03-06	Elementary	109	15.4
04-05	Elementary	5	0.7
04-06	Elementary	4	0.6
05	Elementary	1	0.1
05-06	Middle	2	0.6
05-08	Middle	10	3.1
06	Middle	2	0.6
06-07	Middle	1	0.3
06-08	Middle	264	82.8
07-08	Middle	39	12.2
08	Middle	1	0.3

Table 3

Proficiency Indicator (Reading and Mathematics) Inclusion of All Schools in Accountability N-Count Impact of Using 10 Per Grade or 30 Per School (2019 Data)								
Level	Group	# Schools With At Least One Student	Schools With At Least 10 Students Per Grade		Schools With At Least 30 Students Per School			
			Number	Percent	Number	Number of Schools Compared to 10 Per Grade	Percent	Difference in Percent of Schools Compared to 10 per grade
All Schools (Elementary, Middle, High combined)	All Students	1,254	1,244	99.2	1,246	2	99.4	0.2
	Black	1,001	307	30.7	290	-17	29.0	-1.7
	Hispanic	1,131	270	23.9	265	-5	23.4	-0.5
	White	1,253	1,214	96.9	1,219	5	97.3	0.4
	Economic Disadvantaged	1,254	1,217	97.0	1,211	-6	96.6	-0.4
	English Learner	880	142	16.1	157	15	17.8	1.7
	Students with Disability	1,252	585	46.7	652	67	52.1	5.4
	Two/more races	1,092	124	11.4	113	-11	10.3	-1.1
	Asian	745	47	6.3	44	-3	5.9	-0.4
Elementary Schools	All Students	707	701	99.2	706	5	99.9	0.7
	Black	560	145	25.9	168	23	30.0	4.1
	Hispanic	652	82	12.6	126	44	19.3	6.7
	White	706	675	95.6	685	10	97.0	1.4
	Economic Disadvantaged	707	683	96.6	695	12	98.3	1.7
	English Learner	525	76	14.5	104	28	19.8	5.3
	Students with Disability	707	233	33.0	403	170	57.0	24.0
	Two/more races	635	19	3.0	30	11	4.7	1.7
	Asian	394	9	2.3	16	7	4.1	1.8
Middle Schools	All Students	319	315	98.7	319	4	100.0	1.3
	Black	253	82	32.4	83	1	32.8	0.4
	Hispanic	290	97	33.4	110	13	37.9	4.5

	White	319	311	97.5	318	7	99.7	2.2
	Economic Disadvantaged	319	308	96.6	315	7	98.7	2.1
	English Learner	218	32	14.7	37	5	17.0	2.3
	Students with Disability	318	194	61.0	215	21	67.6	6.6
	Two/more races	275	55	20.0	83	28	30.2	10.2
	Asian	212	16	7.5	23	7	10.8	3.3
High Schools	All Students	228	228	100.0	221	-7	96.9	-3.1
	Black	188	80	42.6	39	-41	20.7	-21.9
	Hispanic	189	91	48.1	29	-62	15.3	-32.8
	White	228	228	100.0	216	-12	94.7	-5.3
	Economic Disadvantaged	228	226	99.1	201	-25	88.2	-10.9
	English Learner	137	34	24.8	16	-18	11.7	-13.1
	Students with Disability	227	158	69.6	34	-124	15.0	-54.6
	Two/more races	182	50	27.5	0	-50	0.0	-27.5
	Asian	139	22	15.8	5	-17	3.6	-12.2

Table 4

Proficiency Indicator (Reading and Mathematics) Inclusion of Elementary Schools in Accountability N-Count Impact of Using 10 Per Grade or 30 Per School (2019 Data)								
Level	Group	# Schools With At Least One Student	Schools With At Least 10 Students Per Grade		Schools With At Least 30 Students Per School			
			Number	Percent	Number	Number of Schools Compared to 10 Per Grade	Percent	Difference in Percent of Schools Compared to 10 per grade
Elementary Schools with 1 accountable grade	All Students	10	10	100.0	10	0	100.0	0.0
	Black	8	2	25.0	0	-2	0.0	-25.0
	Hispanic	9	0	0.0	0	0	0.0	0.0
	White	10	10	100.0	10	0	100.0	0.0
	Economic Disadvantaged	10	10	100.0	10	0	100.0	0.0
	English Learner	7	0	0.0	0	0	0.0	0.0
	Students with Disability	10	8	80.0	2	-6	20.0	-60.0
	Two/more races	10	2	20.0	0	-2	0.0	-20.0
	Asian	6	0	0.0	0	0	0.0	0.0
Elementary Schools with 2 accountable grades	All Students	22	22	100.0	22	0	100.0	0.0
	Black	20	4	20.0	2	-2	10.0	-10.0
	Hispanic	22	3	13.6	2	-1	9.1	-4.5
	White	22	22	100.0	22	0	100.0	0.0
	Economic Disadvantaged	22	21	95.5	21	0	95.5	0.0
	English Learner	18	2	11.1	2	0	11.1	0.0
	Students with Disability	22	18	81.8	14	-4	63.6	-18.2
	Two/more races	22	2	9.1	1	-1	4.5	-4.6
	Asian	14	0	0.0	0	0	0.0	0.0
Elementary Schools with 3 accountable grades	All Students	566	562	99.3	565	3	99.8	0.5
	Black	462	129	27.9	152	23	32.9	5.0
	Hispanic	524	74	14.1	109	35	20.8	6.7
	White	565	537	95.0	544	7	96.3	1.3
	Economic Disadvantaged	566	547	96.6	556	9	98.2	1.6

	English Learner	432	67	15.5	89	22	20.6	5.1
	Students with Disability	566	189	33.4	318	129	56.2	22.8
	Two/more races	512	15	2.9	25	10	4.9	2.0
	Asian	326	7	2.1	10	3	3.1	1.0
Elementary Schools with 4 accountable grades	All Students	109	107	98.2	109	2	100.0	1.8
	Black	70	10	14.3	14	4	20.0	5.7
	Hispanic	97	5	5.2	15	10	15.5	10.3
	White	109	106	97.2	109	3	100.0	2.8
	Economic Disadvantaged	109	105	96.3	108	3	99.1	2.8
	English Learner	68	7	10.3	13	6	19.1	8.8
	Students with Disability	109	18	16.5	69	51	63.3	46.8
	Two/more races	91	0	0.0	4	4	4.4	4.4
	Asian	48	2	4.2	6	4	12.5	8.3

Table 5

Proficiency Indicator (Reading and Mathematics) Inclusion of Middle Schools in Accountability N-Count Impact of Using 10 Per Grade or 30 Per School (2019 Data)								
Level	Group	# Schools With At Least One Student	Schools With At Least 10 Students Per Grade		Schools With At Least 30 Students Per School			
			Number	Percent	Number	Number of Schools Compared to 10 Per Grade	Percent	Difference in Percent of Schools Compared to 10 per grade
Middle Schools with 1 accountable grade	All Students	3	3	100.0	3	0	100.0	0.0
	Black	3	3	100.0	2	-1	66.7	-33.3
	Hispanic	3	2	66.7	1	-1	33.3	-33.4
	White	3	3	100.0	3	0	100.0	0.0
	Economic Disadvantaged	3	3	100.0	3	0	100.0	0.0
	English Learner	3	1	33.3	0	-1	0.0	-33.3
	Students with Disability	3	3	100.0	2	-1	66.7	-33.3
	Two/more races	3	2	66.7	1	-1	33.3	-33.4
	Asian	3	0	0.0	0	0	0.0	0.0
Middle Schools with 2 accountable grades	All Students	42	42	100.0	42	0	100.0	0.0
	Black	29	12	41.4	9	-3	31.0	-10.4
	Hispanic	40	17	42.5	15	-2	37.5	-5.0
	White	42	42	100.0	42	0	100.0	0.0
	Economic Disadvantaged	42	42	100.0	42	0	100.0	0.0
	English Learner	31	4	12.9	2	-2	6.5	-6.4
	Students with Disability	42	31	73.8	29	-2	69.0	-4.8
	Two/more races	36	10	27.8	7	-3	19.4	-8.4
	Asian	32	4	12.5	3	-1	9.4	-3.1
Middle Schools with 3	All Students	264	260	98.5	264	4	100.0	1.5
	Black	211	65	30.8	70	5	33.2	2.4
	Hispanic	237	75	31.6	90	15	38.0	6.4
	White	264	256	97.0	263	7	99.6	2.6

accountable grades	Economic Disadvantaged	264	253	95.8	260	7	98.5	2.7
	English Learner	175	26	14.9	33	7	18.9	4.0
	Students with Disability	263	156	59.3	176	20	66.9	7.6
	Two/more races	226	42	18.6	74	32	32.7	14.1
	Asian	168	12	7.1	20	8	11.9	4.8
Middle Schools with 4 accountable grades	All Students	10	10	100.0	10	0	100.0	0.0
	Black	10	2	20.0	2	0	20.0	0.0
	Hispanic	10	3	30.0	4	1	40.0	10.0
	White	10	10	100.0	10	0	100.0	0.0
	Economic Disadvantaged	10	10	100.0	10	0	100.0	0.0
	English Learner	9	1	11.1	2	1	22.2	11.1
	Students with Disability	10	4	40.0	8	4	80.0	40.0
	Two/more races	10	1	10.0	1	0	10.0	0.0
	Asian	9	0	0.0	0	0	0.0	0.0

Table 6

Separate Academic Indicator (Science, Social Studies and Writing) Inclusion of All Schools in Accountability N-Count Impact of Using 10 Per Grade or 30 Per School (2019 Data)								
Level	Group	# Schools With At Least One Student	Schools With At Least 10 students Per Grade		Schools With At Least 30 students Per School			
			Number	Percent	Number	Number of Schools Compared to 10 Per Grade	Percent	Difference in Percent of Schools Compared to 10 Per Grade
All Schools (Elementary, Middle, High combined)	All Students	1,243	1,237	99.5	1,220	-17	98.1	-1.4
	Black	949	315	33.2	232	-83	24.4	-8.8
	Hispanic	1,081	287	26.5	164	-123	15.2	-11.3
	White	1,242	1,210	97.4	1,176	-34	94.7	-2.7
	Economic Disadvantaged	1,243	1,213	97.6	1,163	-50	93.6	-4.0
	English Learner	820	152	18.5	106	-46	12.9	-5.6
	Students with Disability	1,241	634	51.1	321	-313	25.9	-25.2
	Two/more races	1,040	134	12.9	47	-87	4.5	-8.4
	Asian	659	52	7.9	26	-26	3.9	-4.0
Elementary Schools	All Students	698	694	99.4	688	-6	98.6	-0.8
	Black	519	154	29.7	124	-30	23.9	-5.8
	Hispanic	619	99	16.0	60	-39	9.7	-6.3
	White	697	670	96.1	651	-19	93.4	-2.7
	Economic Disadvantaged	698	678	97.1	666	-12	95.4	-1.7
	English Learner	482	86	17.8	65	-21	13.5	-4.3
	Students with Disability	698	279	40.0	118	-161	16.9	-23.1
	Two/more races	594	23	3.9	8	-15	1.3	-2.6
	Asian	326	12	3.7	8	-4	2.5	-1.2
Middle Schools	All Students	317	315	99.4	311	-4	98.1	-1.3
	Black	242	81	33.5	69	-12	28.5	-5.0

	Hispanic	276	99	35.9	75	-24	27.2	-8.7
	White	317	312	98.4	308	-4	97.2	-1.2
	Economic Disadvantaged	317	309	97.5	297	-12	93.7	-3.8
	English Learner	202	32	15.8	27	-5	13.4	-2.4
	Students with Disability	316	196	62.0	170	-26	53.8	-8.2
	Two/more races	265	61	23.0	39	-22	14.7	-8.3
	Asian	195	18	9.2	13	-5	6.7	-2.5
High Schools	All Students	228	228	100.0	221	-7	96.9	-3.1
	Black	188	80	42.6	39	-41	20.7	-21.9
	Hispanic	186	89	47.8	29	-60	15.6	-32.2
	White	228	228	100.0	217	-11	95.2	-4.8
	Economic Disadvantaged	228	226	99.1	200	-26	87.7	-11.4
	English Learner	136	34	25.0	14	-20	10.3	-14.7
	Students with Disability	227	159	70.0	33	-126	14.5	-55.5
	Two/more races	181	50	27.6	0	-50	0.0	-27.6
	Asian	138	22	15.9	5	-17	3.6	-12.3

Table 7

Separate Academic Indicator (Science, Social Studies and Writing) Inclusion of Schools in Accountability N-Count Impact of Using 10 Per Grade or 30 Per School (2019 Data)								
Level	Group	# Schools With At Least One Student	Schools With At Least 10 students Per Grade		Schools With At Least 30 students Per School			
			Number	Percent	Number	Number of Schools Compared to 10 Per Grade	Percent	Difference in Percent of Schools Compared to 10 Per Grade
Elementary (4th grade only)	All Students	17	17	100.0	17	0	100.0	0.0
	Black	14	1	7.1	0	-1	0.0	-7.1
	Hispanic	15	4	26.7	1	-3	6.7	-20.0
	White	17	17	100.0	16	-1	94.1	-5.9
	Economic Disadvantaged	17	17	100.0	16	-1	94.1	-5.9
	English Learner	12	2	16.7	1	-1	8.3	-8.4
	Students with Disability	17	15	88.2	0	-15	0.0	-88.2
	Two/more races	15	1	6.7	0	-1	0.0	-6.7
	Asian	7	0	0.0	0	0	0.0	0.0
Elementary (grades 3-5 and 4-5)	All Students	680	676	99.4	670	-6	98.5	-0.9
	Black	505	153	30.3	124	-29	24.6	-5.7
	Hispanic	603	95	15.8	59	-36	9.8	-6.0
	White	679	652	96.0	634	-18	93.4	-2.6
	Economic Disadvantaged	680	660	97.1	649	-11	95.4	-1.7
	English Learner	469	84	17.9	64	-20	13.6	-4.3
	Students with Disability	680	263	38.7	118	-145	17.4	-21.3
	Two/more races	578	22	3.8	8	-14	1.4	-2.4
	Asian	319	12	3.8	8	-4	2.5	-1.3
Middle (grades 5-8)	All Students	10	10	100.0	10	0	100.0	0.0
	Black	10	2	20.0	2	0	20.0	0.0
	Hispanic	10	3	30.0	3	0	30.0	0.0
	White	10	10	100.0	10	0	100.0	0.0

	Economic Disadvantaged	10	10	100.0	10	0	100.0	0.0
	English Learner	8	1	12.5	1	0	12.5	0.0
	Students with Disability	10	4	40.0	8	4	80.0	40.0
	Two/more races	9	1	11.1	1	0	11.1	0.0
	Asian	9	0	0.0	0	0	0.0	0.0
Middle (grades 6-8 or 7-8)	All Students	303	301	99.3	297	-4	98.0	-1.3
	Black	229	76	33.2	67	-9	29.3	-3.9
	Hispanic	262	94	35.9	72	-22	27.5	-8.4
	White	303	298	98.3	294	-4	97.0	-1.3
	Economic Disadvantaged	303	295	97.4	283	-12	93.4	-4.0
	English Learner	191	30	15.7	26	-4	13.6	-2.1
	Students with Disability	302	188	62.3	161	-27	53.3	-9.0
	Two/more races	252	59	23.4	38	-21	15.1	-8.3
	Asian	183	18	9.8	13	-5	7.1	-2.7