2022-2023 School Year
Issue #2

Instructional Data Warehouse News

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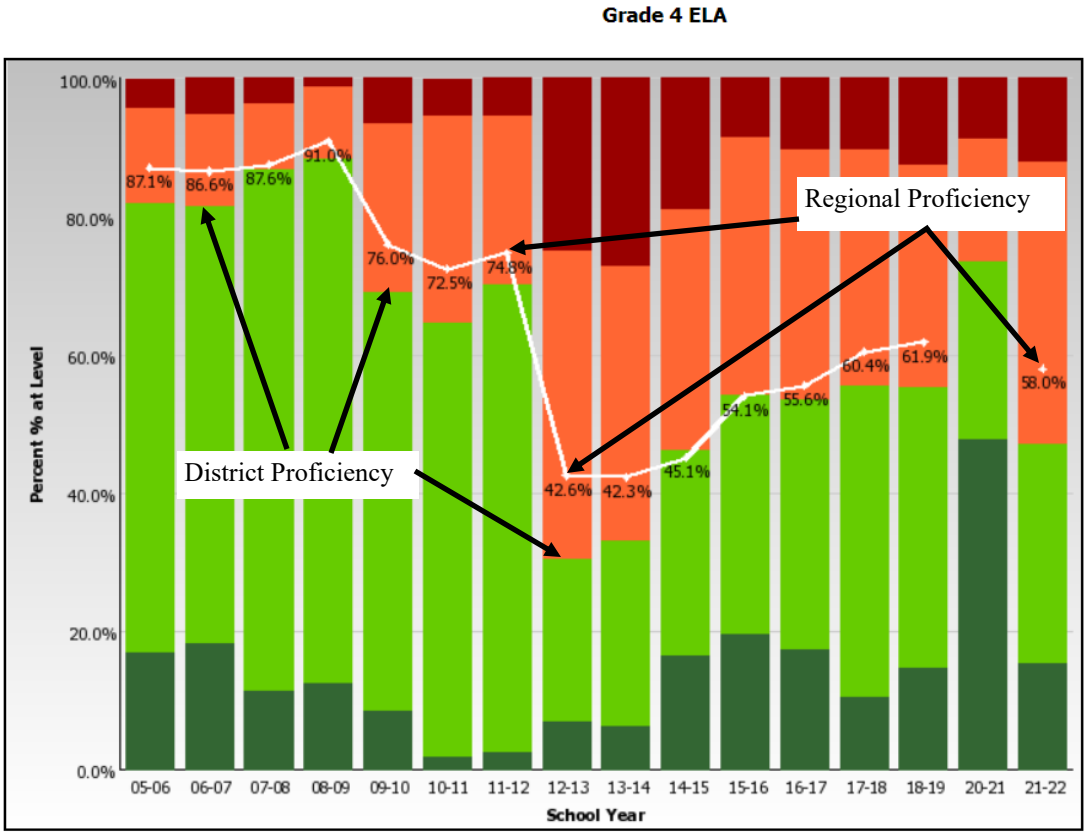
Cautions about Interpreting Data Warehouse Reports
The Pandemic Adds Another Layer of Ambiguity

by Fred Cohen

At almost every training we conduct for the Instructional Data Warehouse, we caution that school data must be looked at in context. Rather than looking at a passing rate or a proficiency rate in isolation, always compare that data point to two other data points—last year's results and a regional (typically Nassau County) benchmark. Without using **both comparisons together**, analyzing proficiency results could lead to faulty conclusions.

Below is a Trends Report (ELA 4 assessment) for a Nassau County district that fell just short of matching Regional proficiency for most years. The combined height of the dark green (Level 4) and light green (Level 3) columns indicates district proficiency for each year shown. Regional proficiency for each year is shown by a white blip mark which connects to a white line for every year except 2021. Each blip mark has a label indicating regional proficiency for that year. See sample chart below.



Upcoming IDW Events

11/2/22
Teacher Interface Training

11/9/22
IDW 3-8 Administrator Training

11/16/22
IDW HS Administrator Training

11/22/22
IDW Guidance Training

11/30/22
Teacher Interface Training

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One can see that between the 08-09 school year and the 09-10 school year, the district's proficiency dropped from approximately 90% to about 70%. What could account for such a decrease in proficiency, especially when the Trends Table (shown below) showed that about 400 students took the ELA 4 assessment both years? A quick look at the Regional benchmark, however, **shows that Nassau County declined almost as much, from 91% to 76%**. A look at NY State figures would show a similar drop in proficiency at the state level.

What has actually occurred is not a decline in student learning, but a change in the way NYSED measured proficiency in the 09-10 school year. Similarly, between 11-12 and 12-13, with the introduction of Common Core examinations, the Nassau County Regional benchmark dropped a precipitous 32 percentage points from 74.8% to 42.3%. Realistically, we know that it is virtually impossible for 15,000 in Nassau County students to suffer such a massive decline in proficiency. So we use the Regional benchmark as a kind of "truth serum" advising us of the actual nature of proficiency for that year. By comparing ourselves to the previous year **and to the Nassau County region,** we can better judge our real change in proficiency.

The table version of this chart appears below and introduces another factor into the proficiency analysis. ***Patterns* of rise and fall are clear on a chart**, but the ***numbers* of test takers are not**. Look below.

		Total Students	Level 1		Level 2		Level 3		Level 4		L3 + L4 Count	L3 + L4 %	L3 + L4 % Region
			#	%	#	%	#	%	#	%			
Grade 4 ELA	05-06	408	17	4.2%	56	13.7%	265	65.0%	70	17.2%	335	82.1%	87.1%
	06-07	409	20	4.9%	55	13.4%	259	63.3%	75	18.3%	334	81.7%	86.6%
	07-08	398	14	3.5%	38	9.5%	300	75.4%	46	11.6%	346	86.9%	87.6%
	08-09	418	4	1.0%	44	10.5%	317	75.8%	53	12.7%	370	88.5%	91.0%
	09-10	384	24	6.2%	94	24.5%	233	60.7%	33	8.6%	266	69.3%	76.0%
	10-11	367	19	5.2%	110	30.0%	231	62.9%	7	1.9%	238	64.9%	72.5%
	11-12	370	19	5.1%	91	24.6%	250	67.6%	10	2.7%	260	70.3%	74.8%
	12-13	392	97	24.7%	175	44.6%	92	23.5%	28	7.1%	120	30.6%	42.6%
	13-14	312	84	26.9%	124	39.7%	84	26.9%	20	6.4%	104	33.3%	42.3%
	14-15	235	44	18.7%	82	34.9%	70	29.8%	39	16.6%	109	46.4%	45.1%
	15-16	167	14	8.4%	62	37.1%	58	34.7%	33	19.8%	91	54.5%	54.1%
	16-17	149	15	10.1%	54	36.2%	54	36.2%	26	17.4%	80	53.7%	55.6%
	17-18	178	18	10.1%	61	34.3%	80	44.9%	19	10.7%	99	55.6%	60.4%
	18-19	229	28	12.2%	74	32.3%	93	40.6%	34	14.8%	127	55.5%	61.9%
	20-21	175	15	8.6%	31	17.7%	45	25.7%	84	48.0%	129	73.7%	
	21-22	220	26	11.8%	90	40.9%	70	31.8%	34	15.5%	104	47.3%	58.0%

Note that soon after the Common Core assessments were introduced in 12-13, participation began to decrease from around 400 students per year to around 200 students. How did opting out affect proficiency scores? **Was the test population actually representative of the entire Grade 4 population?** It's hard to say.

And there is another caution that must be observed when analyzing a district's progress on a **Regents examination Trends chart**. Sometimes, a district's increase in passing rate indicates not an improvement in student learning but a movement away from an inclusion philosophy. The chart may indicate an **increase in passing rate** but a **decrease in the actual number of students passing the exam.** The district raised the standard for admitting students into the course. Always look for an **increase in *average enrollment* passing** instead.

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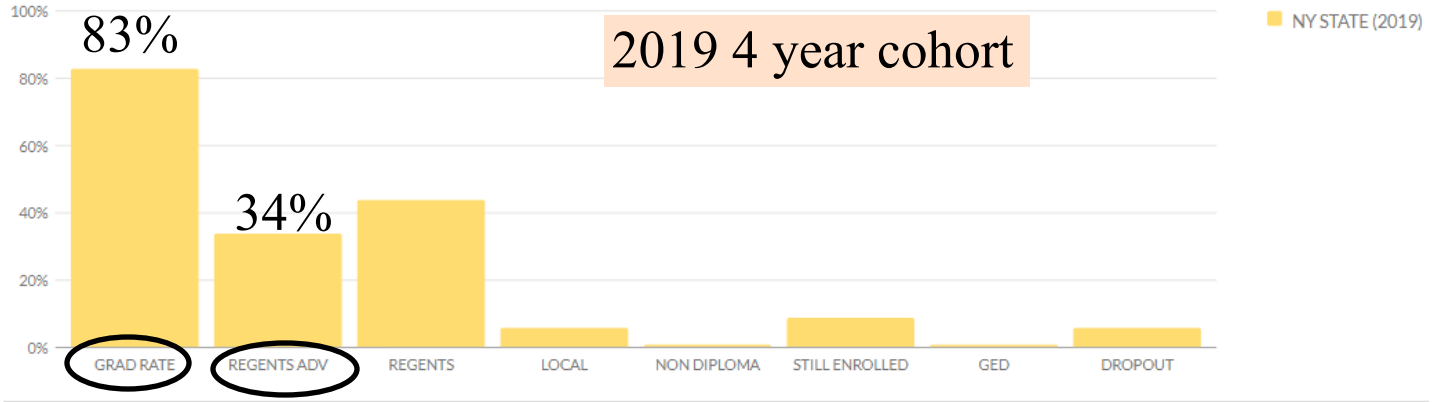
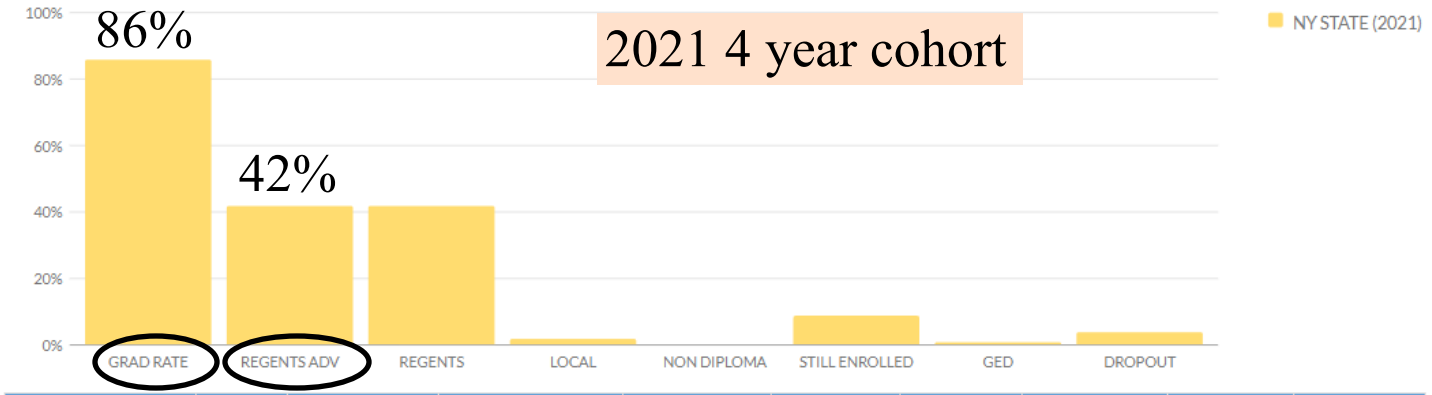
A final caution must be considered due to the learning effects of the pandemic. Articles abound indicating a significant loss of learning starting in the late winter, early spring, of 2020. It is hard to measure the extent of learning loss, but the casual observer would surely say that, at the end of four years, students graduating from high school in 2022 were probably **less academically able than their peers who graduated in 2019**, the last full instructional year before the pandemic.

Data from 2022 is not yet available, but the New York State School Report Card makes it easy to compare Graduation Rates for 2019 and 2021. Let's begin by looking at the **chart and table for 2019.**



Subgroup	Total	GRAD RATE		REGENTS WITH ADVANCED DESIGNATION		REGENTS DIPLOMA		LOCAL DIPLOMA		NON DIPLOMA CRED		STILL ENROLLED		GED TRANSFER		DROPOUT	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
All Students	207,826	173,276	83%	69,751	34%	90,882	44%	12,643	6%	1,200	1%	19,057	9%	1,419	1%	12,776	6%

Now **compare 2021** Graduation Rates below after two years of the pandemic.



Subgroup	Total	GRAD RATE		REGENTS WITH ADVANCED DESIGNATION		REGENTS DIPLOMA		LOCAL DIPLOMA		NON DIPLOMA CRED		STILL ENROLLED		GED TRANSFER		DROPOUT	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
All Students	208,217	179,196	86%	87,701	42%	88,324	42%	3,170	2%	963	0%	18,072	9%	1,187	1%	8,699	4%

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Clearly, **greater success rates in both Graduation Rates and Advanced Regents Diploma Rates does not indicate that the 2021 cohort were more able learners than the 2019 cohort**. Because we are in the middle of the pandemic, we know that exemptions from Regents exams allowed students to pass examinations and even courses without demonstrating the same level of skill or achievement as in past years. And for 2022 and 2023, many districts will allow waivers for Regents grades between 50 and 64, allowing Regents examination credit. What effect will those exceptions have on graduation rates?

The reasons for these accommodations are understood, but they must be recognized as an external factor affecting graduation rates. Accommodations are needed, **but increases in graduation rates clearly are not indicative of an increase in learning**. Just as a decrease in proficiency when the Common Core was introduced did not necessarily mean a decrease in learning, an increasing in graduation rates in 2021 (and likely 2022) did not necessarily mean that a greater percentage of students were now meeting graduation standards.

Astute observers must continuously be on guard to interpret data objectively and insightfully in our quest to use data to improve the instructional process.

As always, IDW personnel are available to provide telephone assistance as well as virtual and in-district training for any district seeking to learn more about this newsletter, or about other best data practices. To schedule a training session or ask any IDW-related questions, please call Fred Cohen at (516) 608-6640, Stephanie Witt at (516) 608-6623, or Tammy Mazza at (516) 608-6633.

What's New in the IDW?

- **Don't forget to view the full suite of IDW Reports for third party examinations**
- **NWEA and Star assessments have been completed (Don't forget to send Nassau BOCES your data), and iReady reports are expanding.**

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