Academic Impact and Recovery

Conceptualization and Results

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Reidy Interactive Lecture Series

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COVID-19 Pandemic

- The COVID-19 Pandemic lead to, arguably, the largest educational disruption in the history of the United States.
- Two-and-a-half years into the pandemic and the impacts of the pandemic are still being investigated.
- The pandemic impacted students academically, emotionally, physically, and financially.
- In the brief overview I'll focus on academic impact and discuss what is meant by academic impact and recovery as well as present results compiled across multiple states.

What is Academic Impact?

- The pandemic and all the ensuing disruptions functioned/functions as an “academic headwind”, impeding (in general) the academic progress of students.
- Headwinds impede progress in two ways:
  - They slow one’s rate of progress (speedometer)
  - And by slowing one’s rate of progress they lead to less distance being travelled (odometer).
- In education these two impediments manifest as:
  - Decrease in student growth (i.e. decrease in velocity = deceleration).
  - Decrease in student attainment.

Learning acceleration/deceleration

- Summarization of assessment data (either for diagnostic or accountability purposes) emphasizes two types of data results: Status (i.e. student attainment) and Growth (i.e., student academic progress)
- With the pandemic, emphasis has changed to look at *academic impact*
- We emphasize that Impact is synonymous with *decleration* and Recovery is synonymous with *acceleration*
  - Deceleration, by definition, is the change in (i.e. decrease) velocity (i.e. growth)
  - Acceleration, by definition, is the change in (i.e., increase) velocity (i.e., growth
- To understand whether and the extent to which recovery is occurring, one must understand the magnitude of impact.

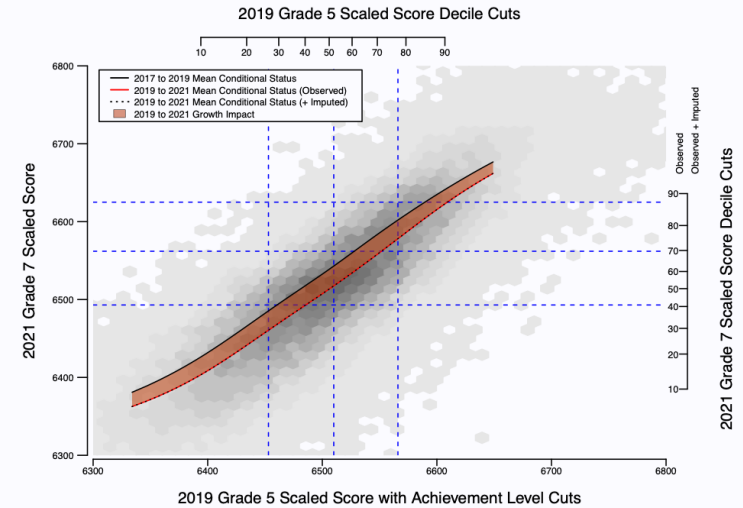
Assessment Data

- To investigate impact we utilized two primary sources of data
  - State summative assessment data
  - State English Language Proficiency Data
- We investigated academic impact by using two complementary analyses:
  - Change in attainment: Equi-percentile scale score change (all grades)
  - Change in growth: Baseline referenced student growth percentile change (grades with growth)

Indiana 2019 to 2021 COVID–19 Academic Impact

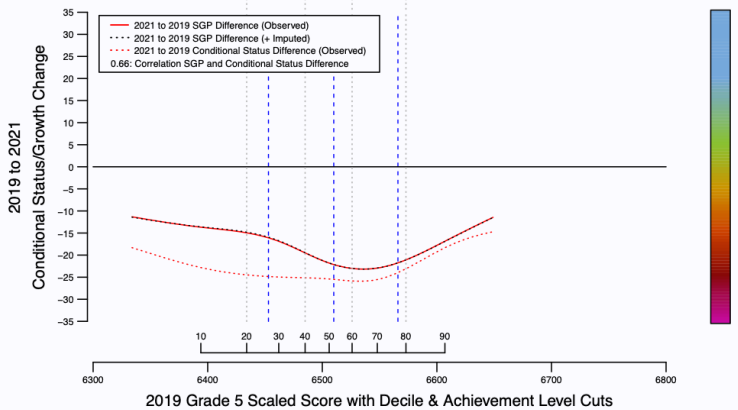
ILEARN Mathematics Grade 7
All Students

Growth: Grade 5 2019 to Grade 7 2021

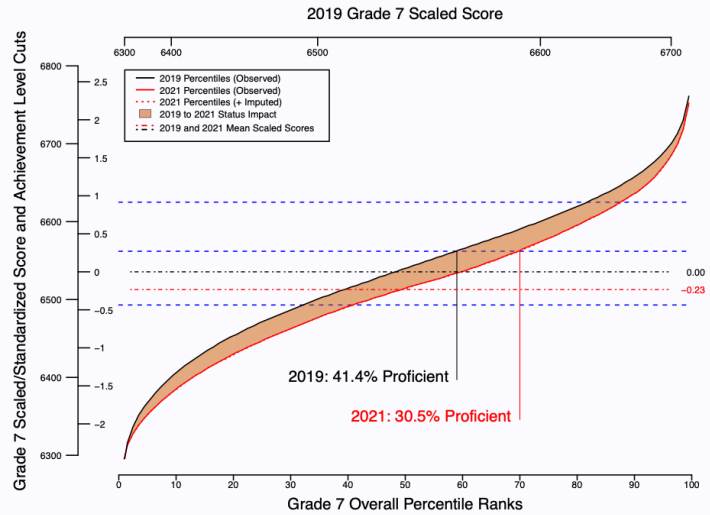


2019 & 2021 Grade 7 Median SGPs by Quintile

	Q1	Q2	Q3	Q4	Q5	Overall
2019 Grade 7 Students	50.0	50.0	50.0	50.0	50.0	50.0
2021 Grade 7 Students	37.0	33.0	28.0	27.0	34.0	32.0
Academic Impact (Observed)	−13.0	−17.0	−22.0	−23.0	−16.0	−18.0
Academic Impact (+ Imputed)	−13.0	−17.0	−22.0	−23.0	−16.0	−18.0
Count Observed 2019	15,509	15,848	15,723	15,831	15,851	78,762
Count Observed 2021	15,622	15,664	15,720	15,739	15,816	78,561

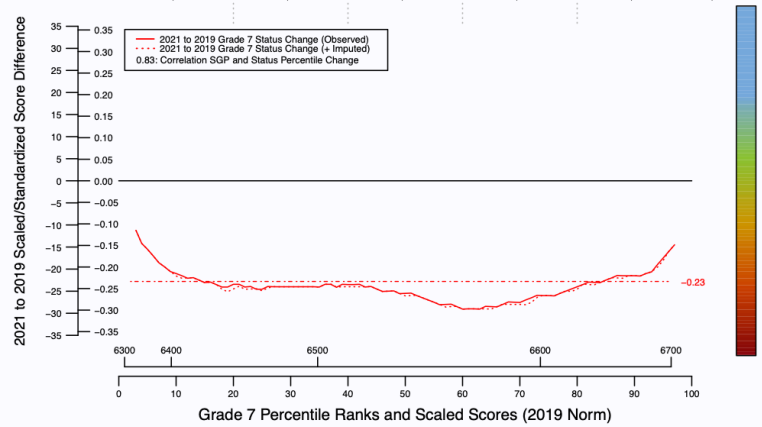


Status: Grade 7 2019 to Grade 7 2021



2019 & 2021 Grade 7 Mean Scaled (Standardized) Scores by Quintile

	Q1	Q2	Q3	Q4	Q5	Overall
2019 Grade 7 Students	6394 (−1.45)	6486 (−0.51)	6540 (0.04)	6591 (0.57)	6667 (1.35)	6536 (0.00)
2021 Grade 7 Students	6377 (−1.63)	6462 (−0.76)	6514 (−0.22)	6564 (0.29)	6647 (1.14)	6513 (−0.23)
Change (Observed)	−17 (−0.18)	−24 (−0.25)	−26 (−0.26)	−27 (−0.27)	−20 (−0.20)	−23 (−0.23)
Change (+ Imputed)	−17 (2.22)	−24 (1.45)	−26 (1.00)	−27 (0.58)	−20 (−0.03)	−23 (−0.24)
Count Observed 2019	16,896	16,948	16,777	17,044	16,913	84,578
Count Observed 2021	16,535	16,496	16,735	16,561	16,556	82,883



Summary

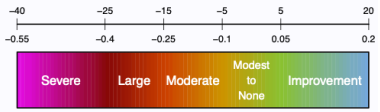
Academic Impact: Overall and by Quintile

Overall					
Large					
Q1	Q2	Q3	Q4	Q5	
Large	Large	Large	Large	Large	

Participation

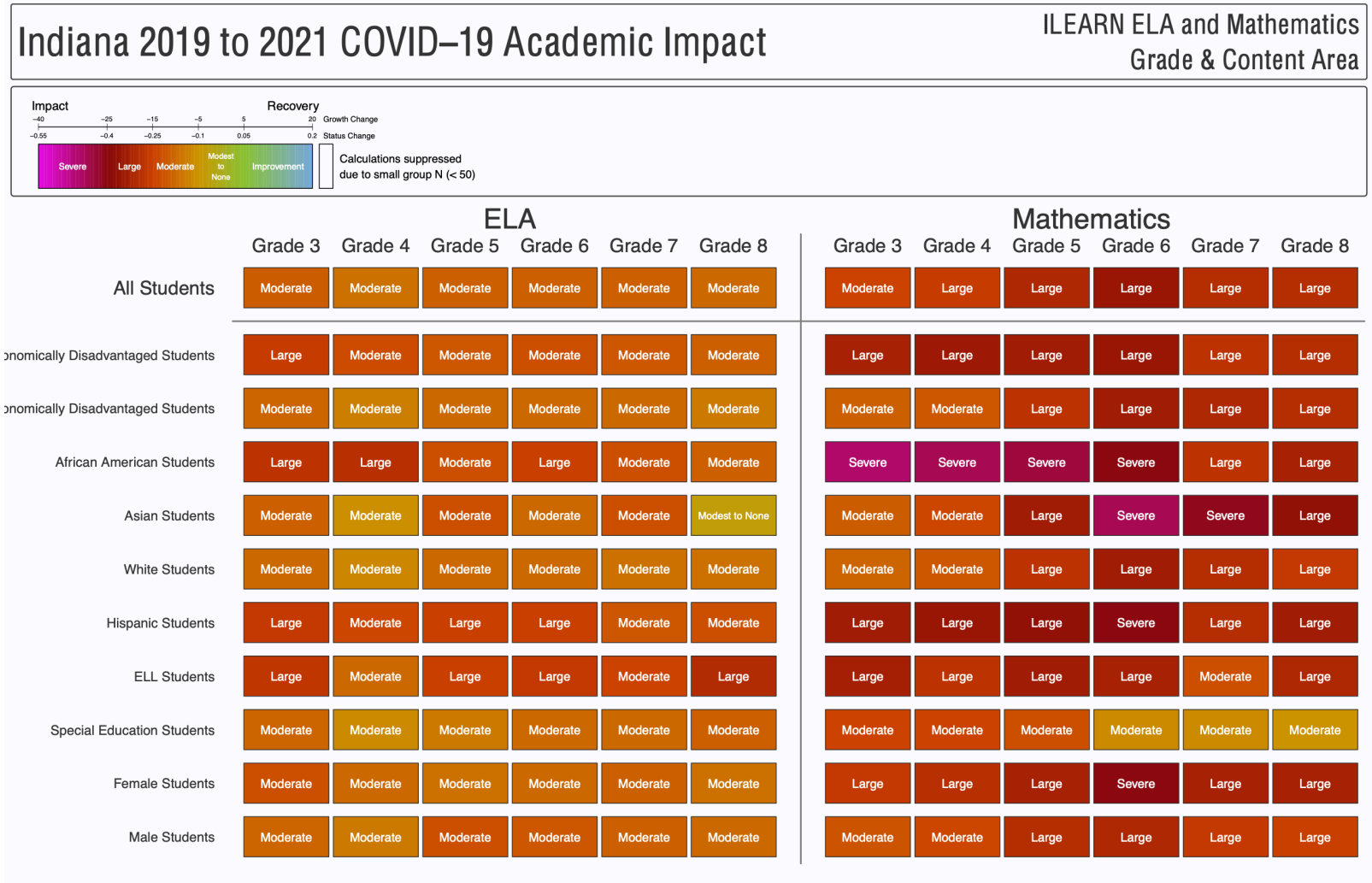
	Total	Status	Growth
2019	84,696	84,578 (99.9%)	78,762 (93.0%)
2021	83,308	82,883 (99.5%)	78,561 (94.3%)

Growth/Status Change Legend



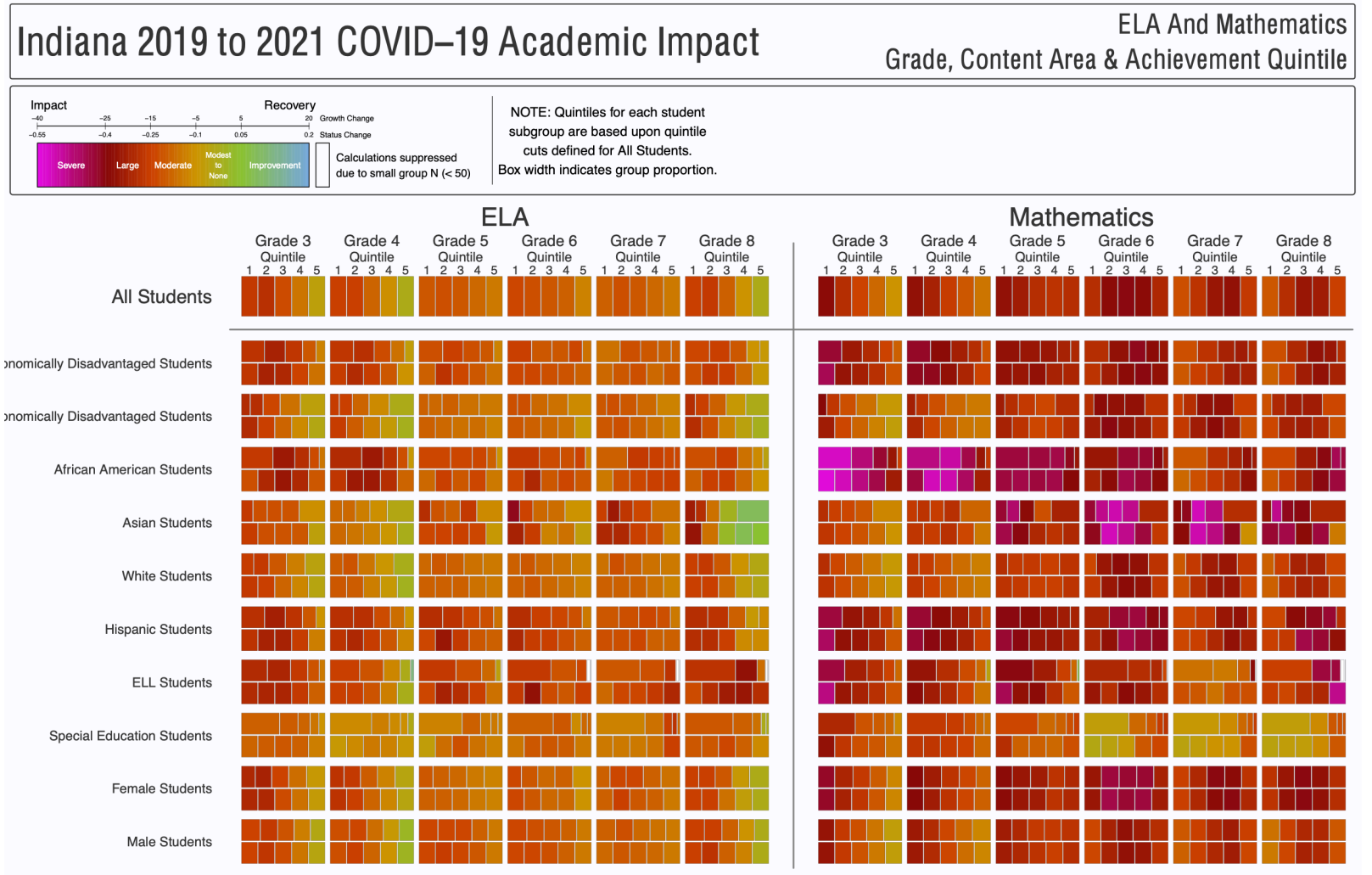
Calculations suppressed due to small group N (< 50)

2020-2021: Academic Impact

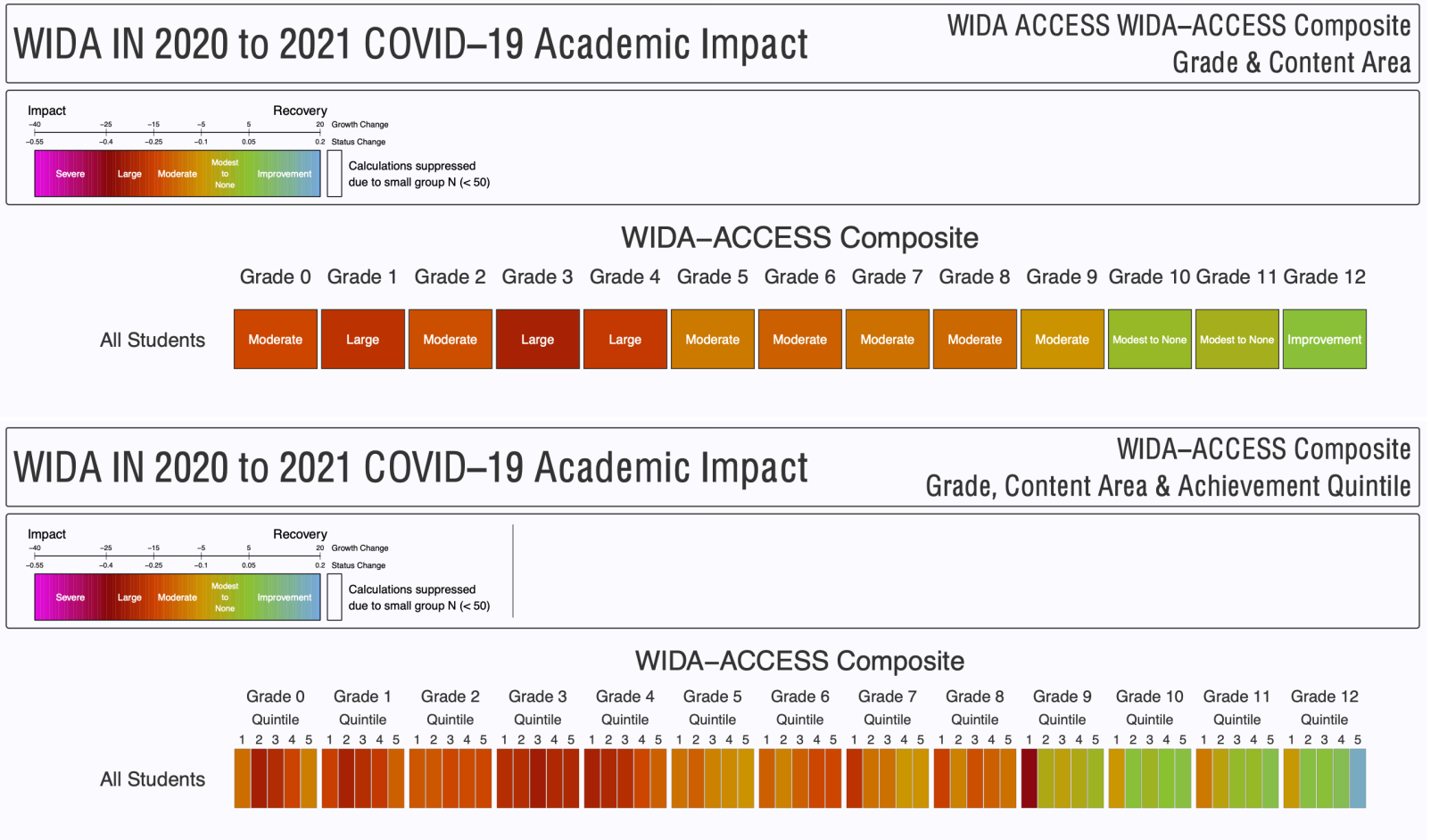


	ELA						Mathematics					
	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
All Students	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Large	Large	Large	Large	Large
onomically Disadvantaged Students	Large	Moderate	Moderate	Moderate	Moderate	Moderate	Large	Large	Large	Large	Large	Large
onomically Disadvantaged Students	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Large	Large	Large	Large
African American Students	Large	Large	Moderate	Large	Moderate	Moderate	Severe	Severe	Severe	Severe	Large	Large
Asian Students	Moderate	Moderate	Moderate	Moderate	Moderate	Modest to None	Moderate	Moderate	Large	Severe	Severe	Large
White Students	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Large	Large	Large	Large
Hispanic Students	Large	Moderate	Large	Large	Moderate	Moderate	Large	Large	Large	Severe	Large	Large
ELL Students	Large	Moderate	Large	Large	Moderate	Large	Large	Large	Large	Large	Moderate	Large
Special Education Students	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Female Students	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Large	Large	Large	Severe	Large	Large
Male Students	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Large	Large	Large	Large

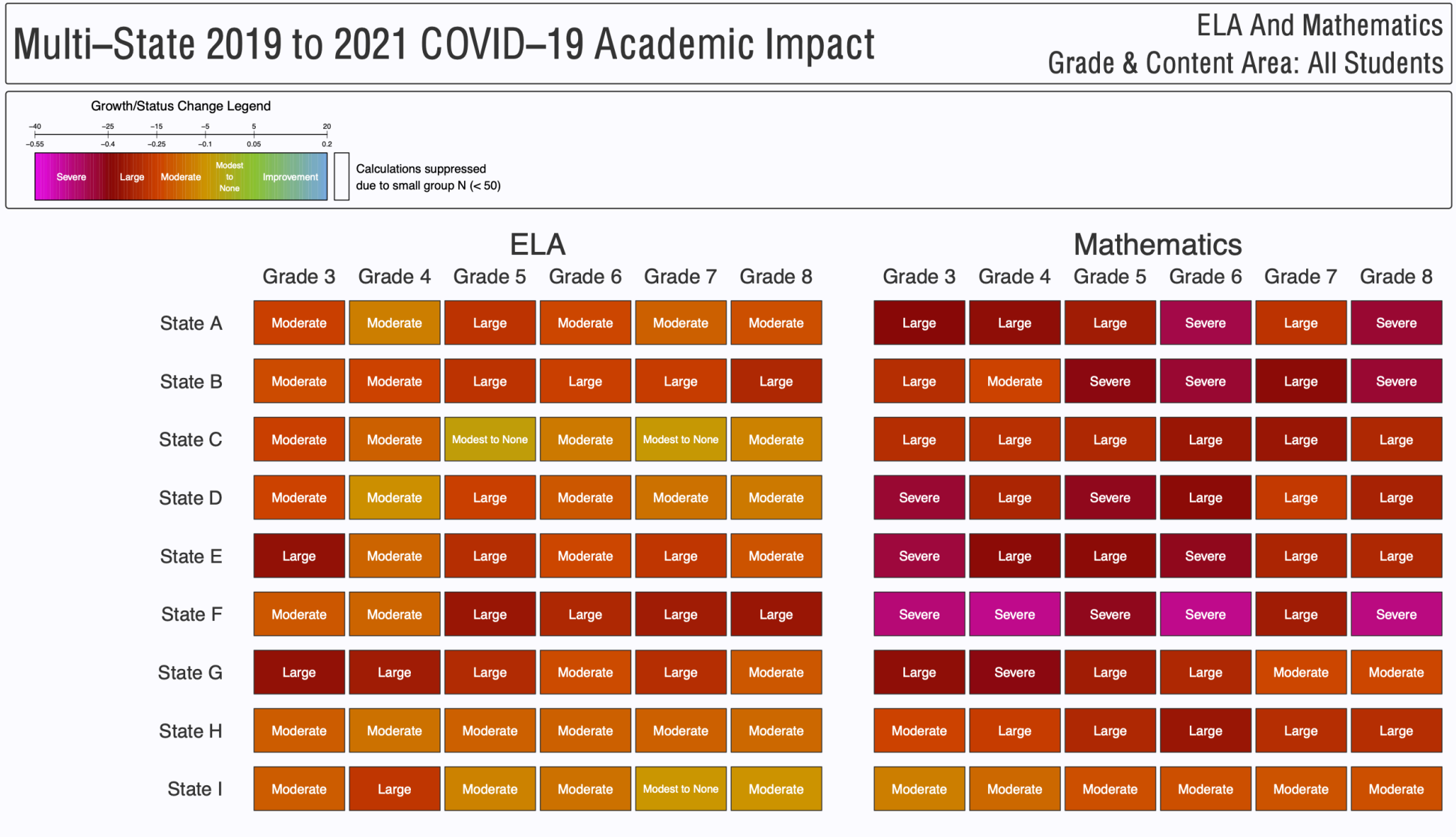
2020-2021: Academic Impact



2020-2021: A Year of Disruptions



2020-2021: Multi-State Impact



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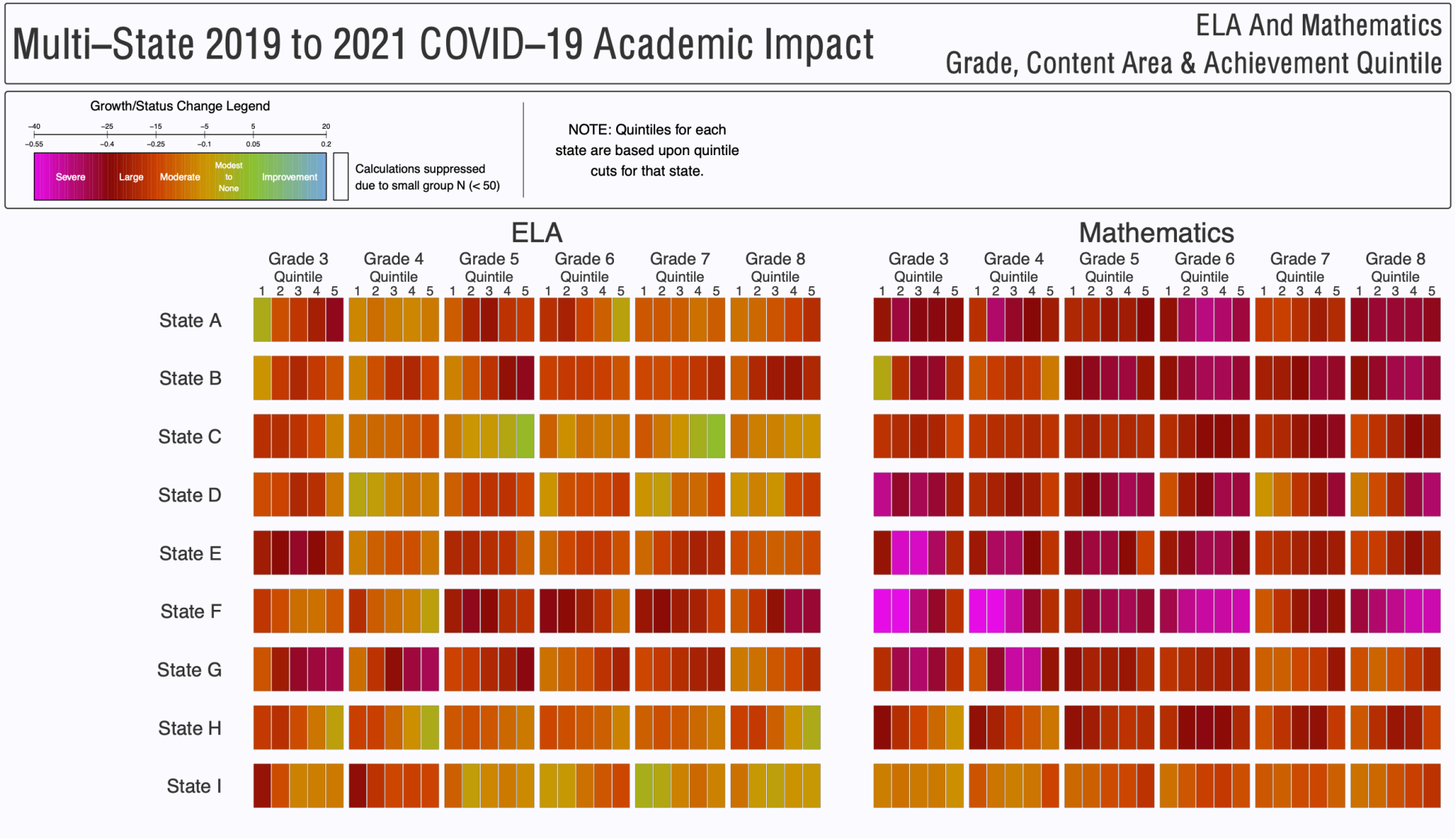
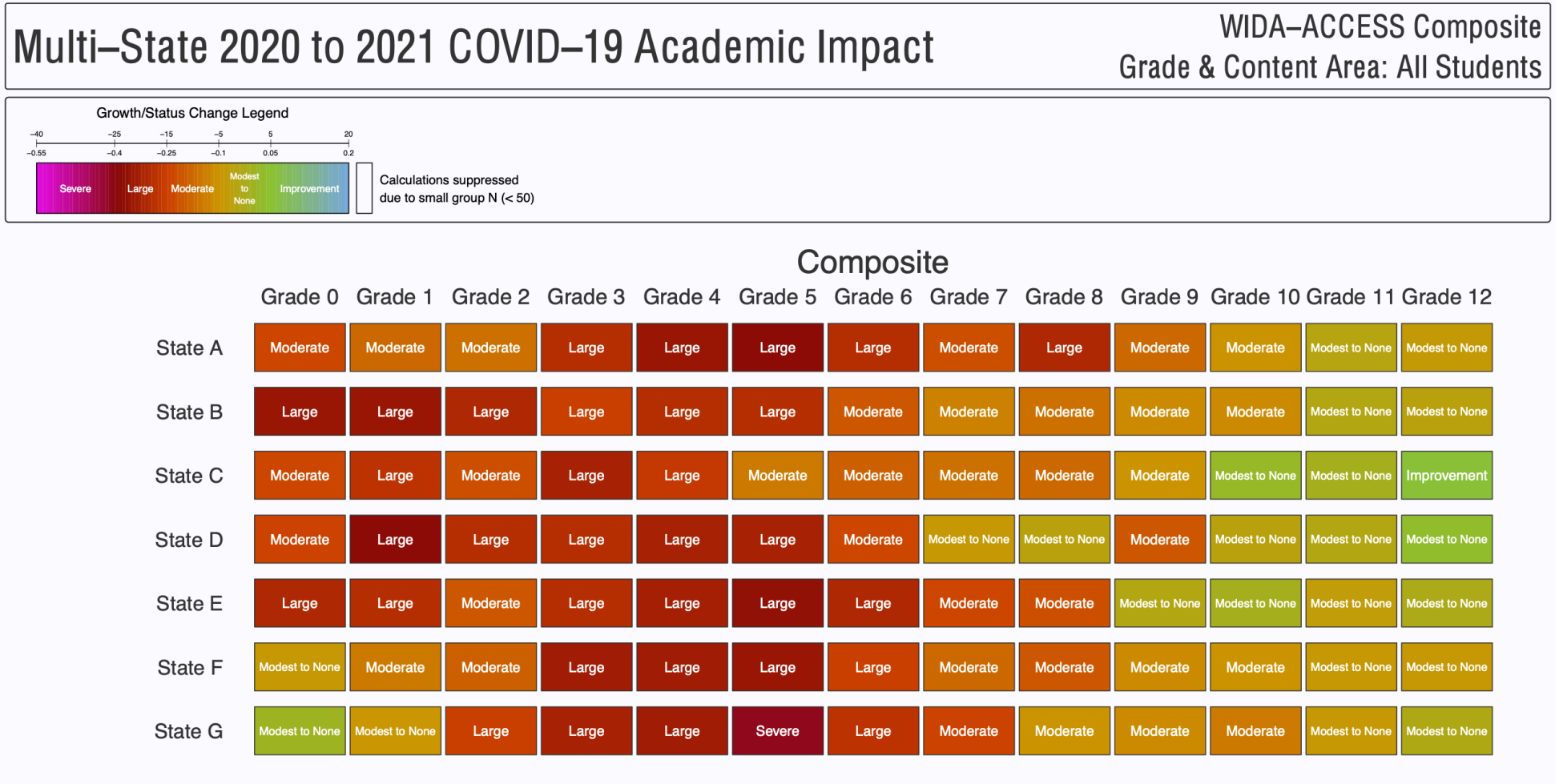


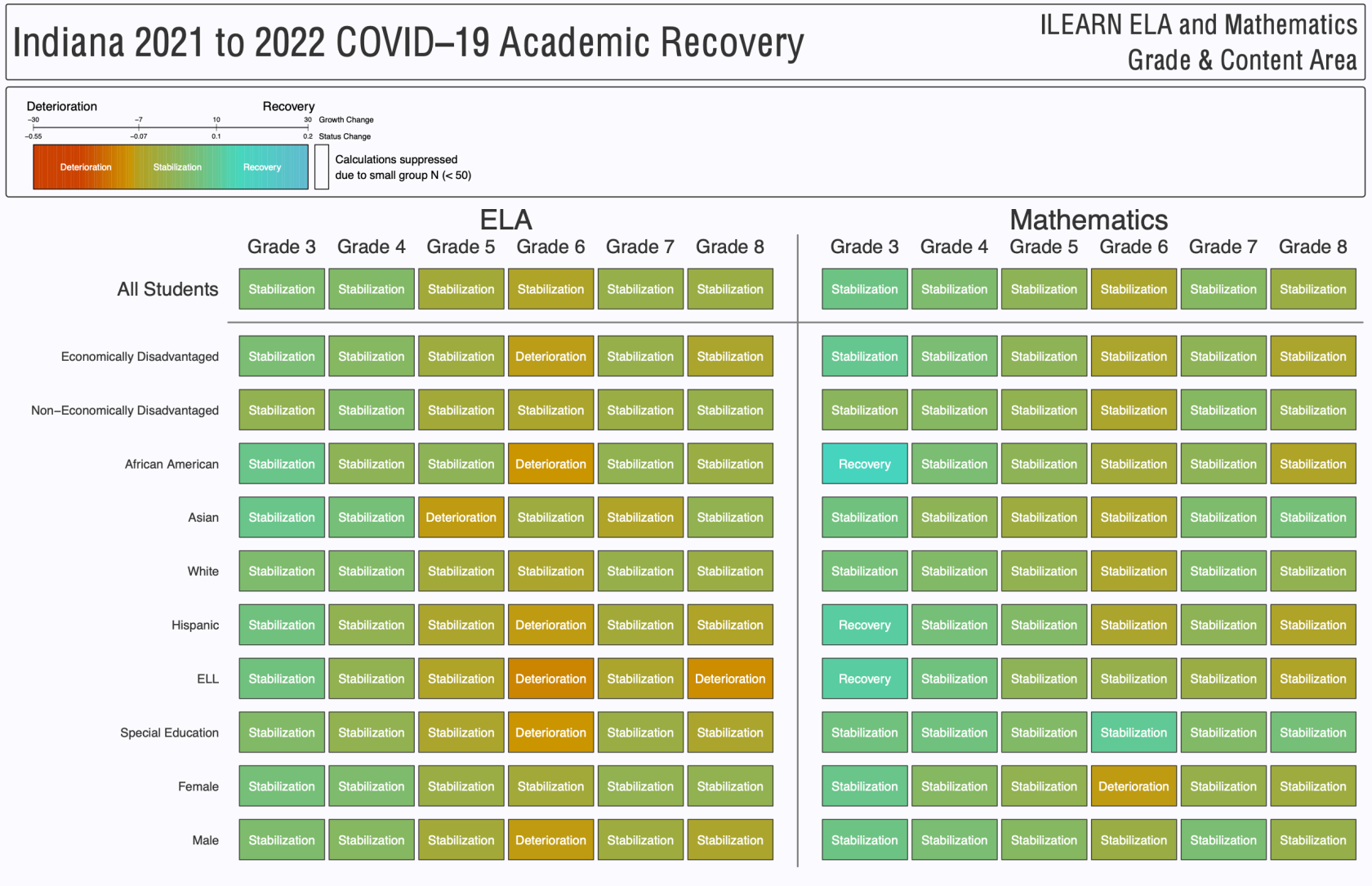
2020-2021: Multi-State Impact (WIDA-ACCESS)



Academic Recovery 2021-2022

- Education during the 2021-2022 academic year was much closer to normal for students.
- With school closer to normal, an explicit goal was to try and help students recover from losses incurred during the initial phase of the pandemic.
- Our primary goal with analyses in 2021-2022 is to accurately distinguish between three situations:
  - Deterioration: Continued decreased rates of learning
  - Stabilization: A return to normal rates of learning
  - Recovery: Acceleration to above normal rates of learning sufficient to catch students up from last year's impacts.

2021-2022: Recovery (or not)



Recovery

- We are in the middle of compiling 2022 results across multiple states looking at academic recovery
- Most results thus far for states suggest a return to typical rates of learning which suggests something between stabilization bordering on recovery to stabilization bordering on deterioration.
- This does not mean students are returning to levels of achievement they would have reached under typical learning scenarios
- Acceleration of learning necessary to get students to recover will be difficult to produce without dramatic interventions

Cautions going forward

- Maintaining scales to pre-pandemic years will increasingly become challenging for states.
- Two views of returning to “normal”
  - Is the system returning to normal.
  - Are students impacted by the pandemic returning to normal.
- System can return to “normal” without student returning to normal — students eventually leave the system.
- Status comparison increasingly become misleading: Grade 3 students in 2022-2023 were in kindergarten in 2019-2020 —

State Leaders

- Darin Nielsen, Utah Department of Education
- Robert Lee, Massachusetts Department of Elementary and Secondary Education
- Charity Flores, Indiana Department of Education