Supporting the Whole Child through the CA MTSS Framework

Introductions

- **Christine Olmstead, Ed.D.**
  - Chief Academic Officer (OCDE)

- **Lauren Duran, M.A.Ed.**
  - Evaluator (OCDE)

- **Nick Gage, Ph.D.**
  - Evaluator (WestEd)

CALIFORNIA
MTSS

Session Agenda

- CA MTSS implementation to date
- Reliability and validity of the FIA
- Impacts of MTSS on school-level outcomes, particularly chronic absenteeism

What is CA MTSS?

California's Multi-Tiered System of Support (CA MTSS) is a comprehensive framework that aligns academic, behavioral, social-emotional learning, and mental health in a fully integrated system of support for the benefit of all students. CA MTSS offers the potential to create needed systemic change through intentional design and redesign of services and supports to quickly identify and match to the needs of all students.

This comprehensive framework is designed to provide effective supports for districts and schools to meet the needs of each and every student in the most inclusive and equitable learning environment.

CALIFORNIA
MTSS

Our WHY for CA MTSS

Reductions in:

- Rates of suspension and expulsion
- Incidents of bullying and harassment
- Discipline referrals
- Referrals to Special Education
- Chronic absenteeism
- Dropout rate

Improvement in:

- Graduation rate
- Academic achievement (ELA and Math)
- Positive school climate/ perceptions of school climate

CALIFORNIA
MTSS

LCAP and California MTSS CROSSWALK

LCAP

Local Control Accountability Plan

The LCAP is a critical part of the new Local Control Funding Formula (LCFF). Each school district must engage parents, educators, employees and the community to establish these plans.

CALIFORNIA MTSS

California Multi-Tiered System of Support

An integrated, comprehensive framework that focuses on instruction, differentiated learning, student-centered learning, individualized student needs, and the alignment of systems necessary for all students' academic, behavioral, and social success.

Conditions of Learning

Students are provided with safe and properly maintained schools. Teachers are fully credentialed to teach their subject area and students are provided with a broad course of study that help them develop critical thinking skills and prepare them to be civically engaged and college and career ready.

All students regardless of age, race, zip code, language, physical challenge, intellectual ability, capacity, or competency are provided with the most inclusive learning environment.

Engagement

Students are provided with motivating programs, coursework and opportunities where they feel respected, included socially and emotionally and cared for both in and out of the classroom. Families, schools and communities work closely together to build a strong framework for student achievement.

Authentic partnerships amongst, students, families, districts and communities that nurture relationships, build trust, ensure cultural, racial, and linguistic equity, and lead to transformative student outcomes.
Source: Community Engagement Initiative (CEI)

Pupil Outcomes

Student achievement means improving outcomes for all students to ensure student success.

All students are provided with a continuum of services that address their academic, behavioral, social-emotional, health and well-being needs.

CA MTSS Journey

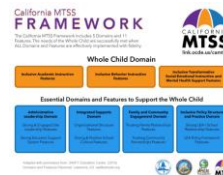| 2016	2017-19	2019	2020	2021	2022
CA SUMS grant awarded	CA MTSS training 58 COEs 600+ LEAs 3 cohorts	School Climate Pilot Phase 2A 14 schools	CA MTSS Pathway Certification for Schools course	School Climate Phase 2B 21 schools	Phase 3

CA MTSS 2016-2026

CA MTSS 2016-2026		
Phases	**Time Period**	**Participants**
Phase 1	**2016-2020**	**11 Region Leads** **58 County Leads** **95 KDS Sites** **600+ LEAs**
Phase 2	**2019-2023**	**P2A 14 sites** **P2B 21 sites**
Phase 3	**2022-2026**	**11 Region Leads** **37 COES** **56 Consortia** (222 schools) **77 Schools**

Next Steps: Phase 3 2022-2026

Purpose of the CA MTSS Phase 3 Grant

Utilize the CA MTSS Framework to support the needs of the whole child with special emphasis on enhancing the SEL/MH domain to improve outcomes for all learners.

How:
- Build educator capacity through professional development using the CA MTSS Pathway Certification for Schools course
- Coaching Model for Administrators to support implementation of the CA MTSS framework at school sites

Coaching Model

- Certified Coach assigned to each Administrator
- Regular meetings to support implementation of CA MTSS
- Technical Assistance, support as needed
- Support with progress monitoring for fidelity of implementation
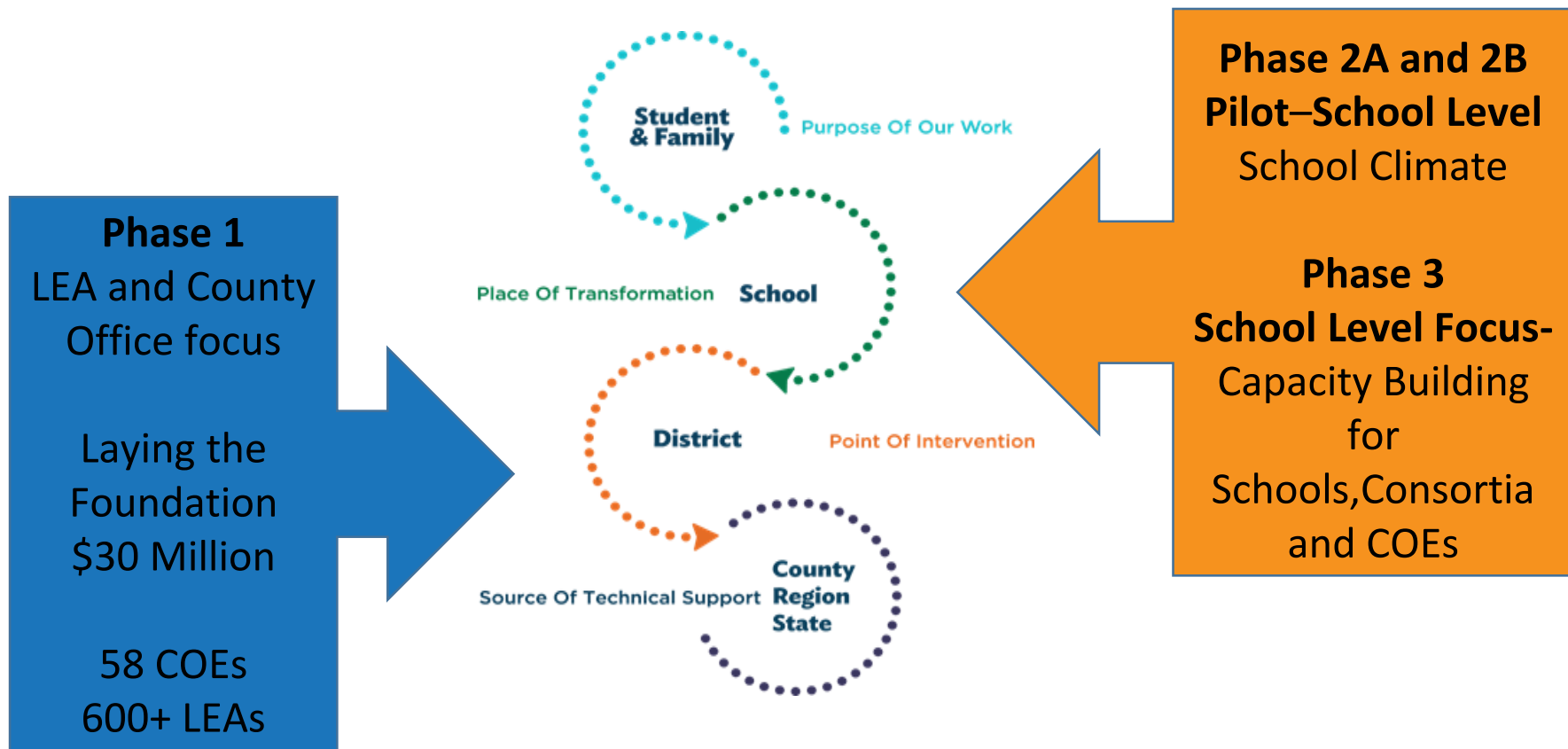
Partnership with Placer County Consortia

- Placer COE-Lead
- Kern COE
- Santa Clara COE
- West Ed

Goal is to curate resources specific to SEL/MH/Trauma Informed Practices and develop training for school sites.
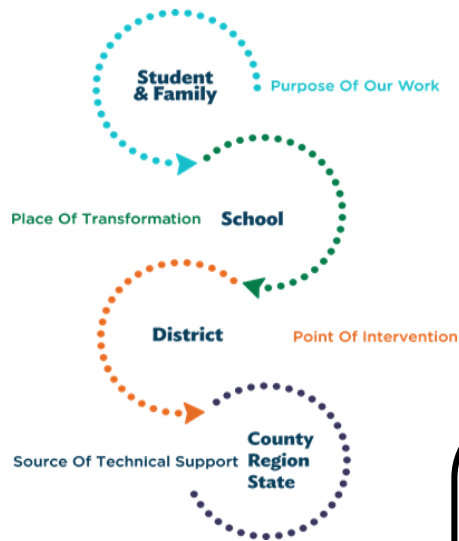
CALIFORNIA
MTSS

Whole System Engagement

Phase 1
LEA and County Office focus

Laying the Foundation
$30 Million

58 COEs
600+ LEAs

Student & Family · Purpose Of Our Work

Place Of Transformation · School

District · Point Of Intervention

Source Of Technical Support · County Region State

Phase 2A and 2B
Pilot–School Level
School Climate

Phase 3
School Level Focus-
Capacity Building for Schools, Consortia and COEs

Statewide System of Support

Student & Family — Purpose Of Our Work

Place Of Transformation — School

District — Point Of Intervention

Source Of Technical Support — County Region State

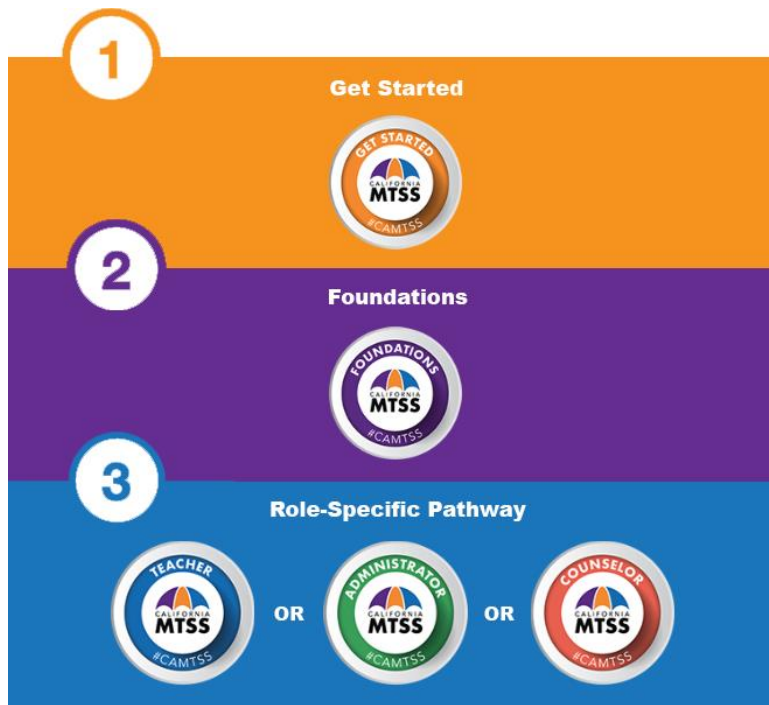**CA MTSS State Support Team** 〕 11 Region Lead Coaches 〕 Regional School Site Coaches 〕 Schools

CA MTSS Pathway Certification for Schools

Role-Specific Pathways

California MTSS
FRAMEWORK

The California MTSS Framework includes 5 Domains and 11 Features. The needs of the Whole Child are successfully met when ALL Domains and Features are effectively implemented with fidelity.

CALIFORNIA
MTSS
link.ocde.us/camtss

Whole Child Domain

Inclusive Academic Instruction Features

Inclusive Behavior Instruction Features

Inclusive Transformative Social-Emotional Instruction and Mental Health Support Features

Essential Domains and Features to Support the Whole Child

Administrative Leadership Domain

Strong & Engaged Site Leadership Features

Strong Educator Support System Features

Integrated Supports Domain

Organizational Structure Features

Strong & Positive School Culture Features

Family and Community Engagement Domain

Trusting Family Partnerships Features

Trusting Community Partnerships Features

Inclusive Policy Structure and Practice Domain

Strong LEA / School Relationship Features

LEA Policy Framework Features

Whole Child Domain

The whole child is supported through a multi-tiered continuum of research-based, system-wide practices of data-based decision making used to meet the academic, behavior, social-emotional and mental health needs of all students.

Inclusive Academic Instruction Features

- Identify and utilize a comprehensive assessment system
- Create and utilize teams, including specialized service providers
- Provide a continuum of support that includes evidence-based practices for universal, supplemental, and intensified supports for academic content
- Develop guidelines to implement curriculum with Universal Design for Learning (UDL)
- Utilize Content Standards and Curriculum Frameworks
- Support Literacy across the content
- Utilize P21 Framework
- Integrate Culturally Relevant and Responsive Teaching Practices and Asset Based Pedagogies

Inclusive Behavior Instruction Features

- Identify and utilize a comprehensive assessment system
- Create and utilize teams, including specialized service providers
- Provide a continuum of support that includes evidence-based practices for universal, supplemental, and intensified supports for behavior
- Integrate Behavior Supports

Inclusive Transformative Social-Emotional Instruction and Mental Health Support Features

- Identify and utilize a comprehensive assessment system
- Create and utilize teams, including specialized service providers, such as community mental health providers
- Integrate trauma-informed practices
- Provide a continuum of support that includes evidence-based practices for universal, supplemental, and intensified supports for social-emotional and mental health
- Integrate SEL competencies aligned to CASEL CA's SEL Guiding Principles and CDE's T-SEL
- Integrate mental health supports
- Support Resilience in Schools

California MTSS
Continuum of Support

Universal Design for Learning and differentiated instruction are integrated and implemented at all levels of the continuum of support to ensure the academic, behavior, social-emotional, and mental health development of ALL students in the most inclusive and equitable learning environment.

CALIFORNIA MTSS

ALL STUDENTS

UNIVERSAL SUPPORT
Evidence-based practices are accessible by ALL students where the integration and implementation of Universal Design for Learning and differentiated instruction support academic, behavior, social-emotional, AND mental health development.

SOME STUDENTS

SUPPLEMENTAL SUPPORT
Additional services are provided to some students to support academic, behavior, social-emotional, and/or mental health through the integration and implementation of Universal Design for Learning and differentiated instruction. Supplemental supports are provided in addition to, not in place of universal supports, and available to all students regardless of identification for specialized services based on need through the use of diagnostic and progress monitoring assessments.
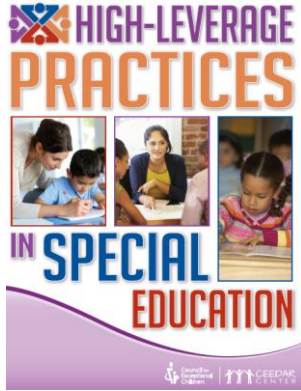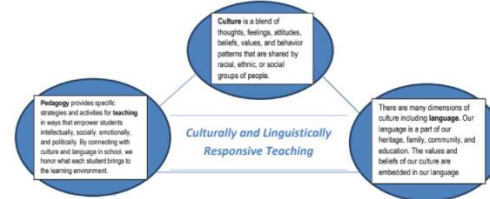
FEW STUDENTS

INTENSIFIED SUPPORT
Targeted supports are provided to students with greater needs to support academic, behavior, social-emotional, and/or mental health through the integration and implementation of Universal Design for Learning and differentiated instruction. Intensified supports are provided in addition to, not in place of universal supports, via specialized service providers, and available to all students regardless of identification for specialized services based on need through the use of diagnostic and progress monitoring assessments.
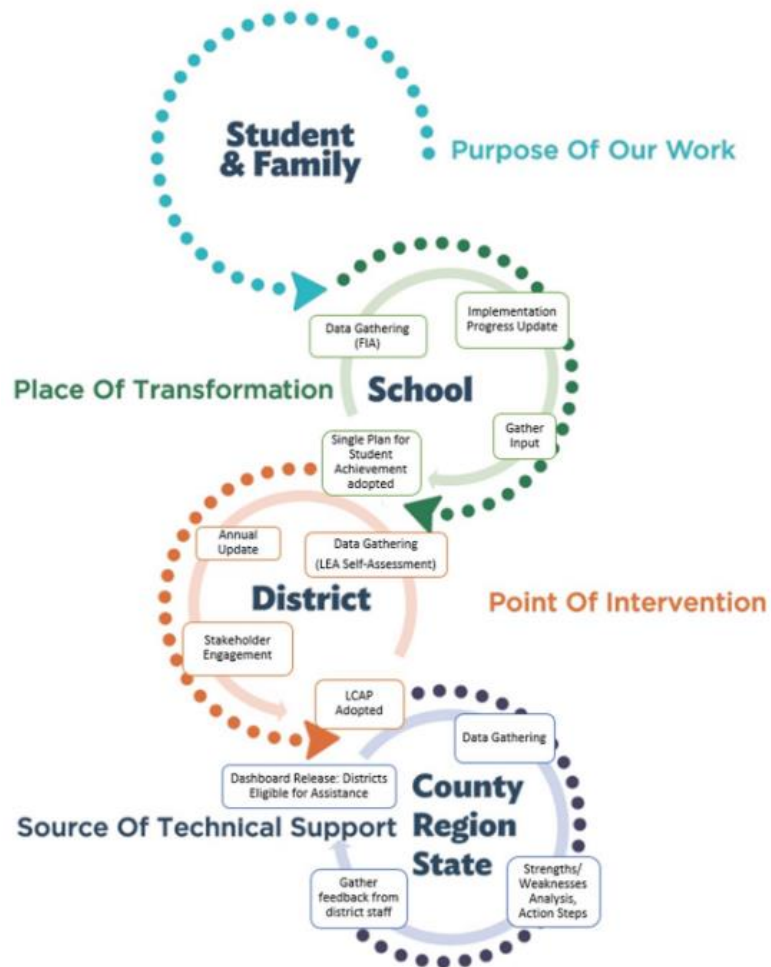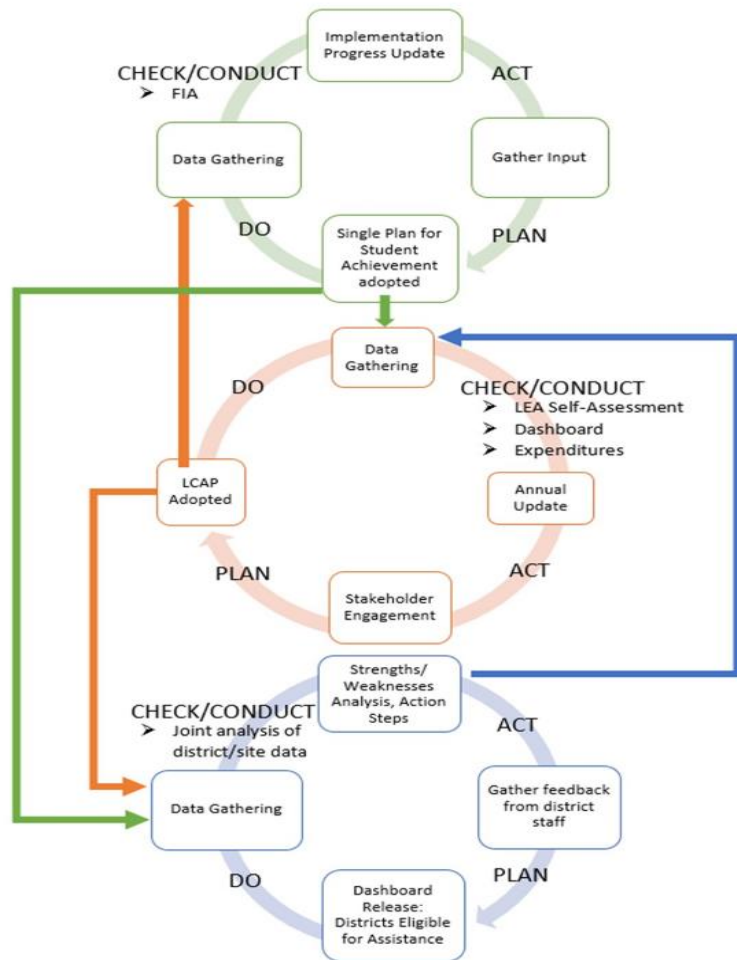
Equitable Practices

Left diagram — three interlocking PDSA cycles:

Top cycle (green):
- Implementation Progress Update
- ACT
- Gather Input
- PLAN
- Single Plan for Student Achievement adopted
- DO
- Data Gathering
- CHECK/CONDUCT
  - FIA

Middle cycle (orange/red):
- Data Gathering
- CHECK/CONDUCT
  - LEA Self-Assessment
  - Dashboard
  - Expenditures
- Annual Update
- ACT
- Stakeholder Engagement
- PLAN
- LCAP Adopted
- DO

Bottom cycle (blue):
- Strengths/Weaknesses Analysis, Action Steps
- ACT
- Gather feedback from district staff
- PLAN
- Dashboard Release: Districts Eligible for Assistance
- DO
- Data Gathering
- CHECK/CONDUCT
  - Joint analysis of district/site data

Right diagram — three linked circular cycles with labels:

- **Student & Family** — Purpose Of Our Work
- **School** — Place Of Transformation
  - Data Gathering (FIA)
  - Implementation Progress Update
  - Gather Input
  - Single Plan for Student Achievement adopted
  - Data Gathering (LEA Self-Assessment)
- **District** — Point Of Intervention
  - Annual Update
  - Stakeholder Engagement
  - LCAP Adopted
- **County Region State** — Source Of Technical Support
  - Dashboard Release: Districts Eligible for Assistance
  - Data Gathering
  - Strengths/Weaknesses Analysis, Action Steps
  - Gather feedback from district staff

Project Measures

Implementation: the degree to which evidence-based practices are in place

Capacity: the systems, processes, personnel, and resources necessary to successfully implement and sustain evidence-based practices.

Student Impacts: academic, behavioral, and social-emotional skills
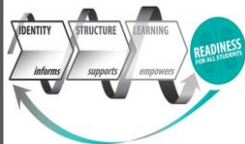
CA MTSS Journey

2016	2017-19	2019	2020	2021	2022

2016 — CA SUMS grant awarded

2017-19 — CA MTSS training 58 COEs 600+ LEAs 3 cohorts

2019 — School Climate Pilot Phase 2A 14 schools

2020 — CA MTSS Pathway Certification for Schools course

2021 — School Climate Phase 2B 21 schools

2022 — Phase 3

CA MTSS 2016-2026

CA MTSS 2016-2026		
Phases	**Time Period**	**Participants**
Phase 1	**2016-2020**	**11 Region Leads** **58 County Leads** **95 KDS Sites** **600+ LEAs**
Phase 2	**2019-2023**	**P2A 14 sites** **P2B 21 sites**
Phase 3	**2022-2026**	**11 Region Leads** **37 COES** **56 Consortia** (222 schools) **77 Schools**

Measures of Implementation

School Wide Implementation Tool (SIT) - Phases 2 & 3
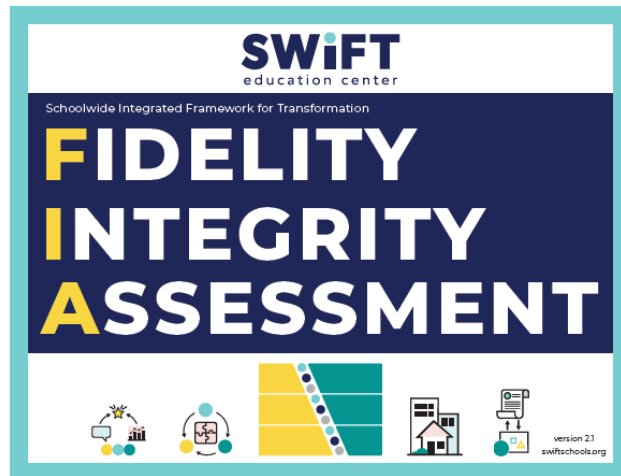
Fidelity Integrity Assessment (FIA) - Phases 1-3

**Local Education Agency Self-Assessment (LEASA) - Phases 1-3**
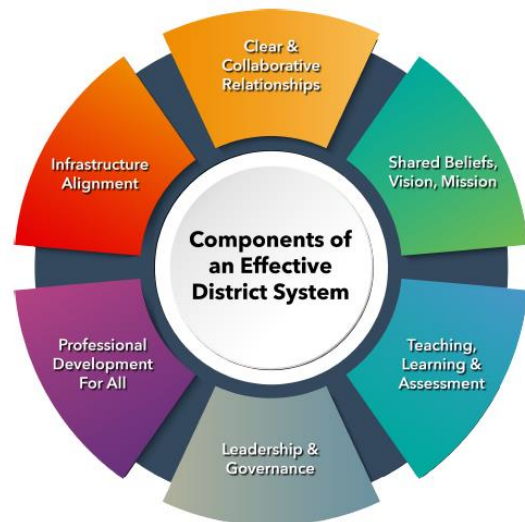
Fidelity Integrity Assessment (FIA)

Used by <u>school leadership teams</u> to examine the current reality, measure the implementation of a multi-tiered system of support
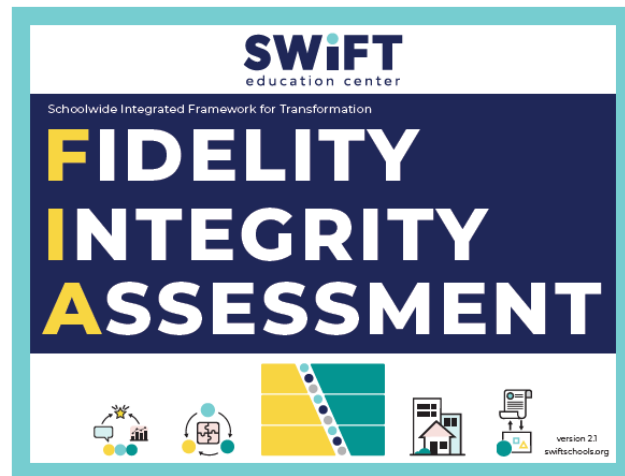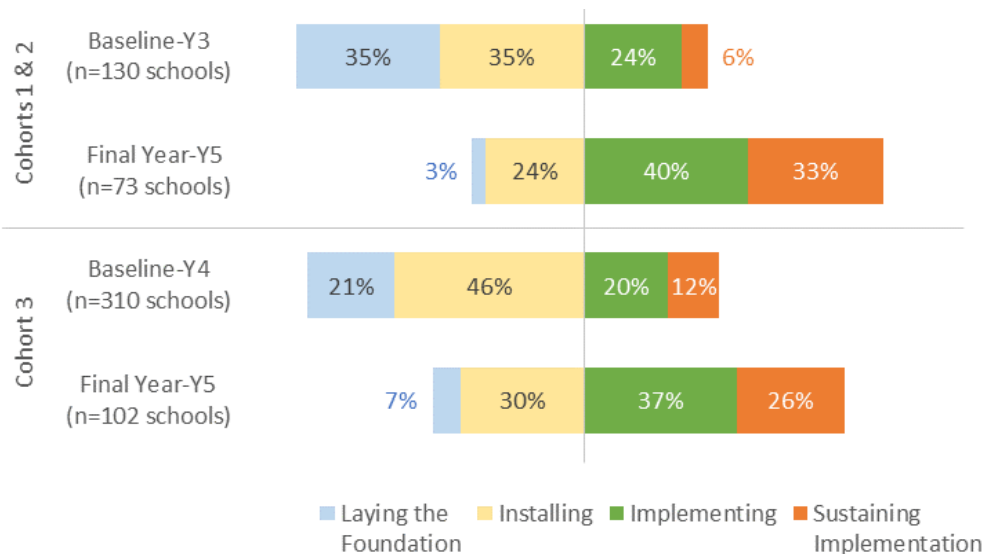
- Developed by SWIFT Education Center (Univ. of Kansas)
- 22 items aligned to the CA MTSS Framework Domains and Features
  - Whole Child
  - Administrative Leadership
  - Integrated Supports
  - Family and Community Engagement
  - Inclusive Policy Structure and Practice
- Stages of Implementation:
  - Laying the Foundation (0)
  - Installing (1)
  - Implementing (2)
  - Sustaining Schoolwide Implementation (3)
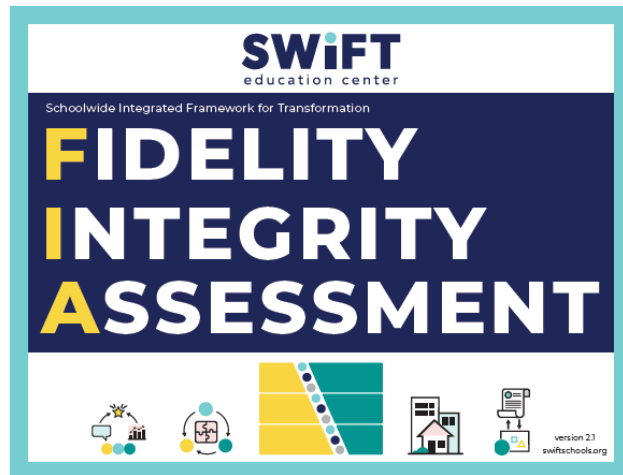
Phase 1 FIA

By the final year of Phase 1, schools and LEAs were **Implementing** or **Sustaining Implementation** on more practices of the CA MTSS Framework as compared to their baselines.

Cohorts 1 & 2

Baseline-Y3 (n=130 schools): 35% | 35% | 24% | 6%
Final Year-Y5 (n=73 schools): 3% | 24% | 40% | 33%

Cohort 3

Baseline-Y4 (n=310 schools): 21% | 46% | 20% | 12%
Final Year-Y5 (n=102 schools): 7% | 30% | 37% | 26%

Legend: Laying the Foundation | Installing | Implementing | Sustaining Implementation

In their own words

*"Thanks to our involvement with CA MTSS we spent time **evaluating our practices in an organized purposeful/intentional ways to arrive at better decision making**. Using the framework/tool provided (FIA) helped our meetings stay focused and action oriented."*

Youthbuild Charter School (Los Angeles County)

*"[CA MTSS] prepared us to deal with learning loss and challenge coming out of the pandemic. We were in a place where **we could provide for the students in a more timely manner** in comparison to our local LEA's who were not in the program."*

Southside Elementary, Southside Elementary SD (San Benito County)

LEA Self-Assessment (LEASA)

Used by <u>LEA/District Leadership Teams</u> to examine the current status of systemic practices.

- Developed by CCSESA
- Based on SWIFT-FIA, District Capacity Assessment (NIRN), LEA Self-Assessment Companion Resource (CCSESA) & Michael Fullan's Coherence Framework
- 25 indicators that measure research-based components of effective district systems
- Scale:
  - Laying the Foundation
  - Installing
  - Implementing
  - Continuous Improvement & Sustainability
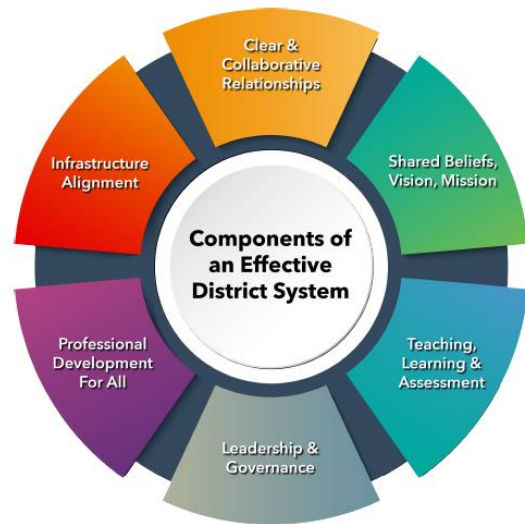
Phase 1 LEASA

Similarly, LEAs were at the **Implementing** or **Continuous Improvement & Sustainability** levels on more practices of the CA MTSS Framework as compared to their baselines.
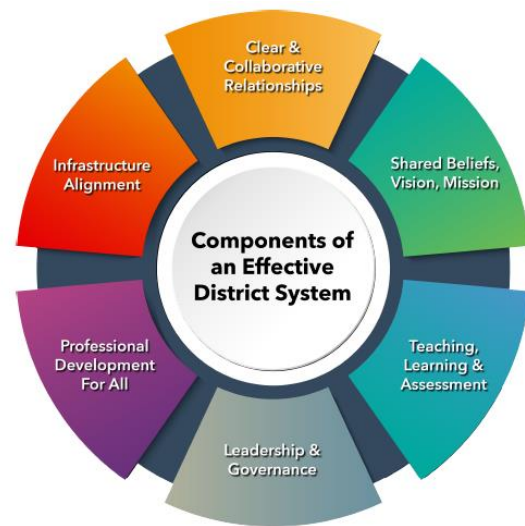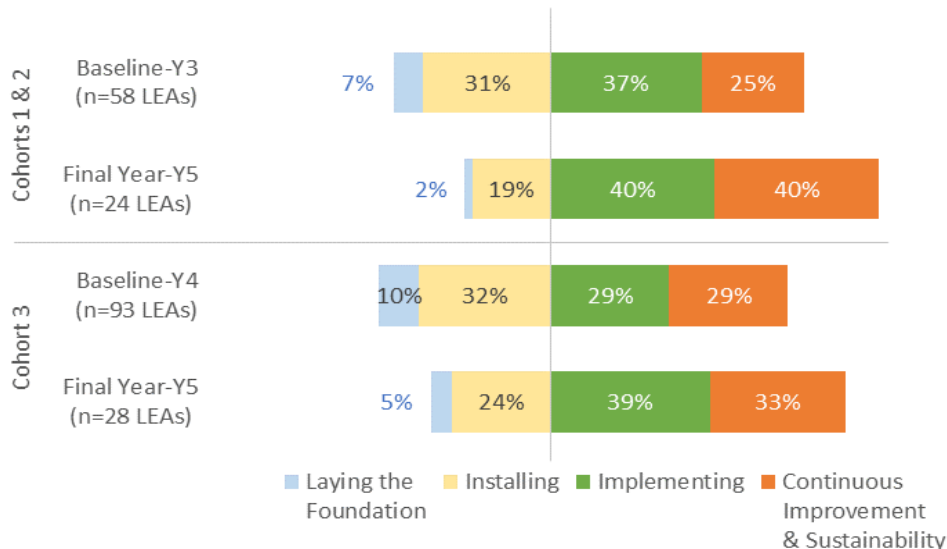
Phase 1 Capacity for Systemic Changes

- Increased or improved services provided for students who are Socioeconomically disadvantaged, Foster youth, and/or English learners

- Increased or improved strategies used to effectively support student success in the least restrictive environment (LRE) and foster greater inclusion

- Multiple school and community resources were leveraged (for example, multiple resources at a school, resources at multiple schools, and collaborations with local mental health agencies to provide school-based mental health services)

- Implementing multi-tiered systems of support including PBIS, Restorative Practices, bullying prevention, social and emotional learning, trauma-informed practice, and cultural competency

- Sustaining changes after the final year by incorporating practices into their LCAP

In their own words

*"It gave us the opportunity to **come together and plan for systems at both the site and district level** to better meet the needs of our students. It also **became the frame for much of our LCAP work** in terms of creating a goal around MTSS that is the umbrella for all the supports we are offering academically, behaviorally, and social-emotionally."*

Lowell Joint School District (Orange County)

*"Students benefited from tiers of support, strategic use of professional staff, **keeping practices that work and getting rid of practices that didn't.**"*

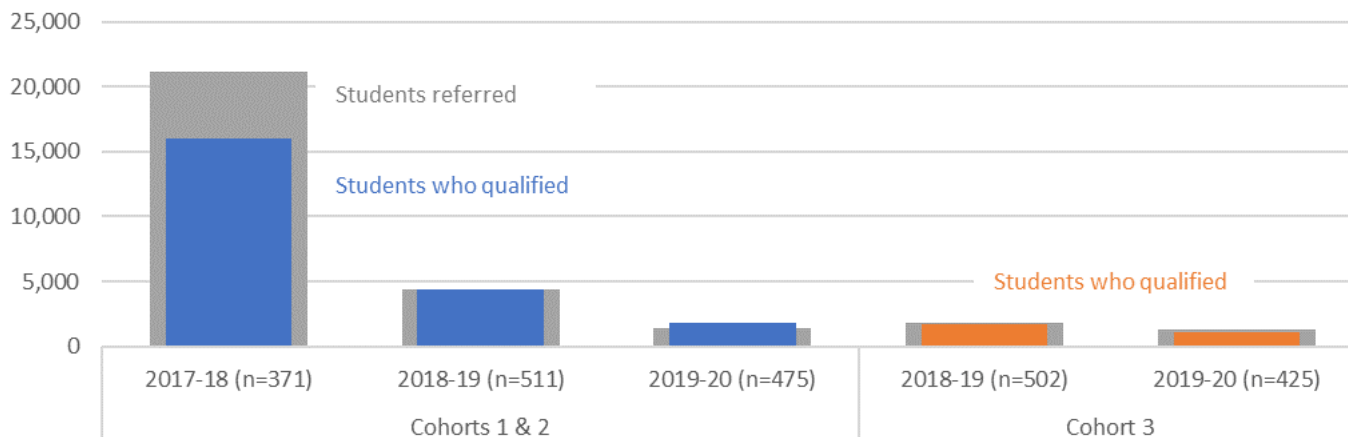Grass Valley School District (Nevada County)

Phase 1 Student Impacts - Special Education Referrals

Cohorts 1 & 2 decreased the number of students referred for Special Education by 93%

Number of students referred for Special Education and number of students who qualified for Special Education
Blue bars represent Cohorts 1 & 2, orange bars represent Cohort 3.
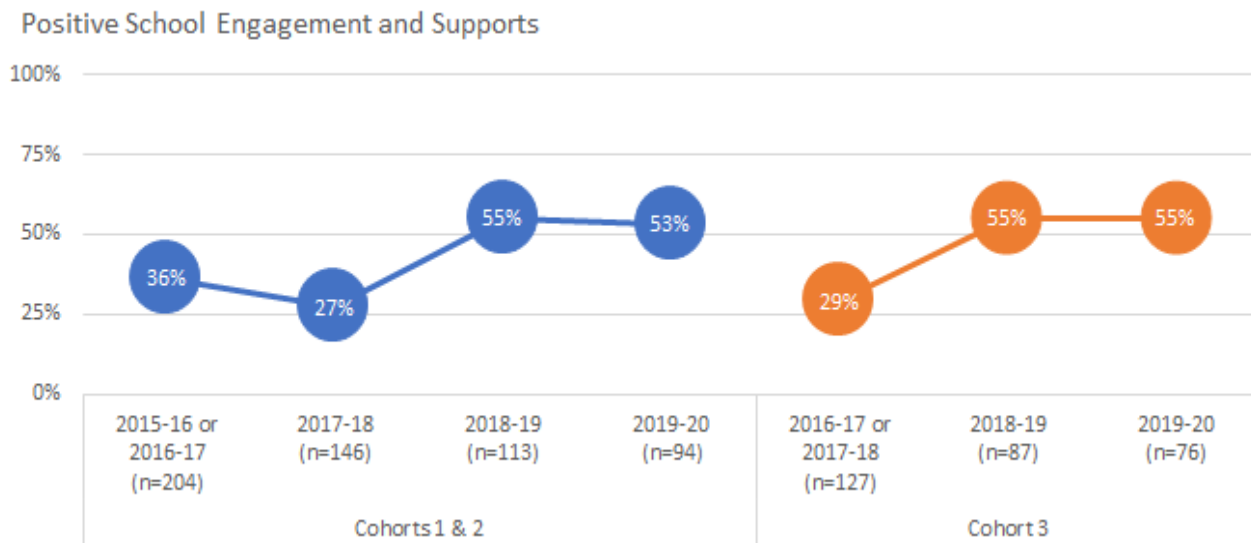
Source: LEA/School Annual Reports

Phase 1 Student Impacts - Positive School Engagement

All 3 Cohorts had increases in Positive School Engagement and Supports

Positive School Engagement and Supports

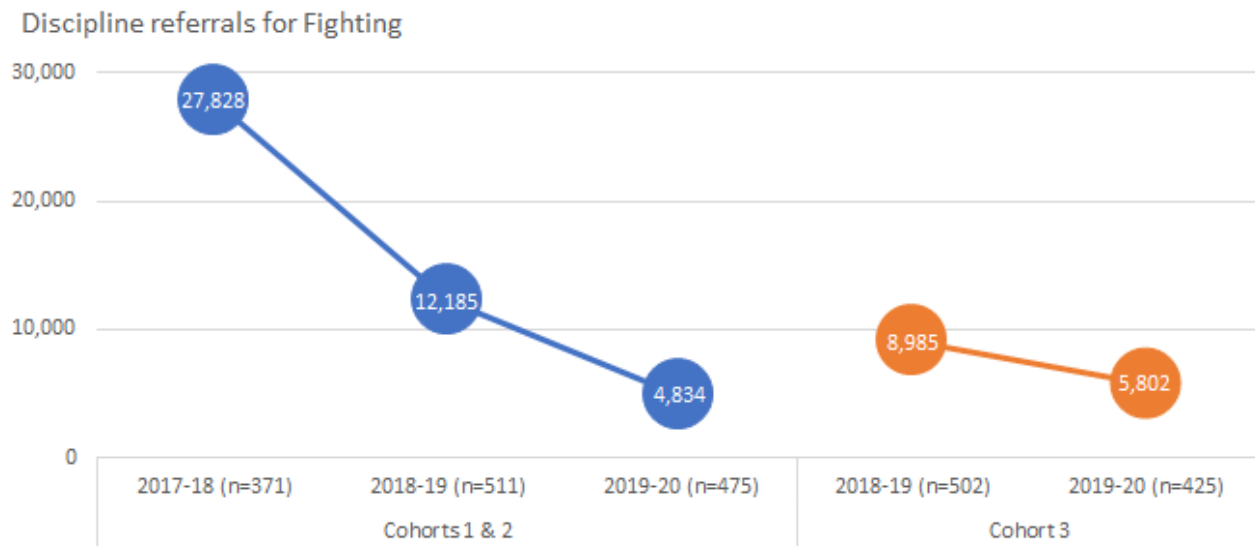|	Cohorts 1 & 2				Cohort 3		
	2015-16 or 2016-17 (n=204)	2017-18 (n=146)	2018-19 (n=113)	2019-20 (n=94)	2016-17 or 2017-18 (n=127)	2018-19 (n=87)	2019-20 (n=76)
	36%	27%	55%	53%	29%	55%	55%

Source: California Healthy Kids Survey LEA Reports

Phase 1 Student Impacts - ODRs: Fighting

All 3 Cohorts had decreases in office discipline referrals for **Fighting**

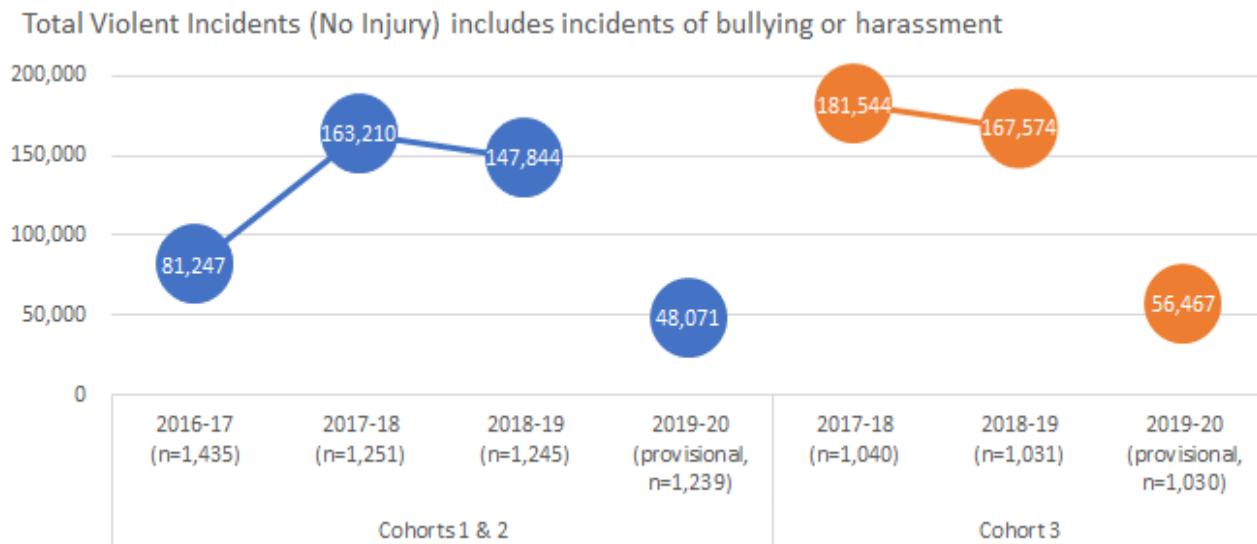Discipline referrals for Fighting

Source: LEA/School Annual Reports

Phase 1 Student Impacts - Bullying/Harassment

All 3 Cohorts had decreases in total incidents of **bullying and harassment**

Total Violent Incidents (No Injury) includes incidents of bullying or harassment

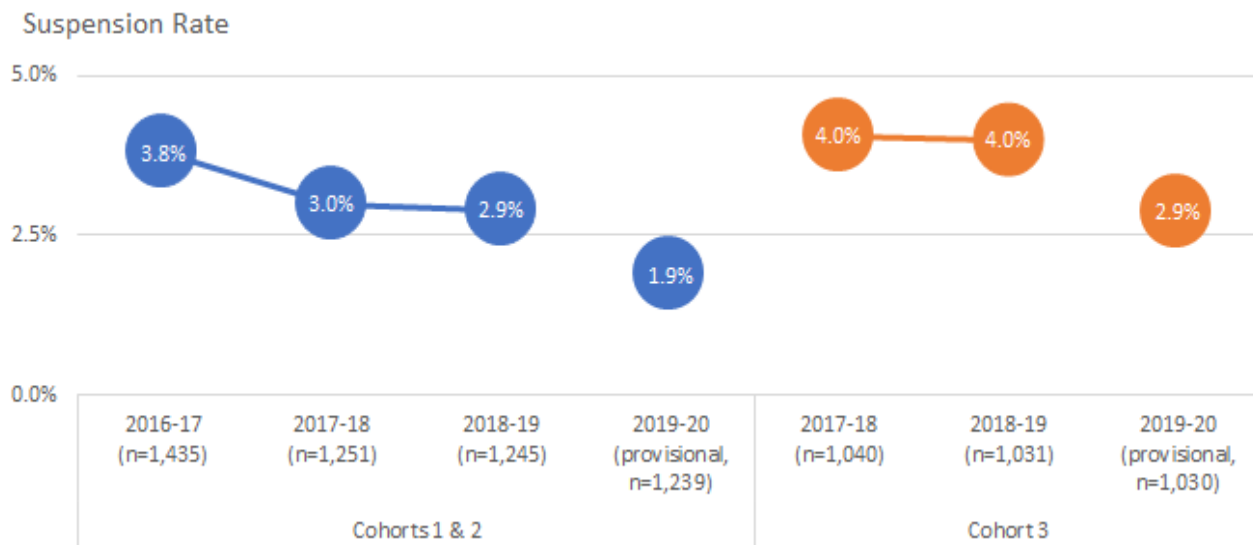| | Cohorts 1 & 2 | | | | Cohort 3 | | |
| --- | --- | --- | --- | --- | --- | --- |
| 2016-17 (n=1,435) | 2017-18 (n=1,251) | 2018-19 (n=1,245) | 2019-20 (provisional, n=1,239) | 2017-18 (n=1,040) | 2018-19 (n=1,031) | 2019-20 (provisional, n=1,030) |
| 81,247 | 163,210 | 147,844 | 48,071 | 181,544 | 167,574 | 56,467 |

Source: CDE Suspension Data and Expulsion Data
2019-20 data is valid and reliable for the time schools were physically open but not comparable to other years.

Phase 1 Student Impacts - Suspension Rate

Cohorts 1 & 2 had a decrease in Suspensions by 1 percentage point

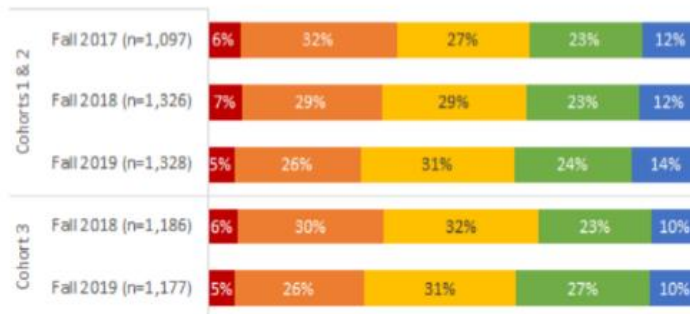# Phase 1 Student Impacts - CA School Dashboards

All 3 Cohorts had **more schools and LEAs performing at the Green and Blue levels for ELA and Math on the CA School Dashboards**

Source: California School Dashboard
Due to the COVID-19 pandemic, state law has suspended the reporting of state and local indicators on the 2020 Dashboard.

CA School Dashboard Performance Levels for ELA

Cohorts 1 & 2
- Fall 2017 (n=1,097): 8% | 36% | 23% | 23% | 10%
- Fall 2018 (n=1,326): 5% | 23% | 32% | 26% | 14%
- Fall 2019 (n=1,328): 4% | 25% | 29% | 25% | 16%

Cohort 3
- Fall 2018 (n=1,186): 5% | 25% | 31% | 27% | 12%
- Fall 2019 (n=1,177): 3% | 23% | 32% | 30% | 12%

CA School Dashboard Performance Levels for Math

Cohorts 1 & 2
- Fall 2017 (n=1,097): 6% | 32% | 27% | 23% | 12%
- Fall 2018 (n=1,326): 7% | 29% | 29% | 23% | 12%
- Fall 2019 (n=1,328): 5% | 26% | 31% | 24% | 14%

Cohort 3
- Fall 2018 (n=1,186): 6% | 30% | 32% | 23% | 10%
- Fall 2019 (n=1,177): 5% | 26% | 31% | 27% | 10%

In their own words

"It is a **joy to see Special Education students thrive in general education classes***! It is a joy to see general education students thrive with extra instructional support (with or without SPED qualification). It is a joy to work with staff members who never use the phrase 'those kids' because we truly believe that* **'those kids' are 'our kids.'**

Mary Peacock Elementary, Del Norte Unified (Del Norte County)

*"***Sites are rethinking their discipline processes and days of suspension are down***. SEL programs have been implemented across all school sites K-12. MTSS teams have been formed and are looking closely at student data and* **intervening sooner than before***. 2 sites will be getting Wellness Centers this year."*

Western Placer Unified (Placer County)

WestEd
WestEd.org

External Evaluation Studies of CA MTSS
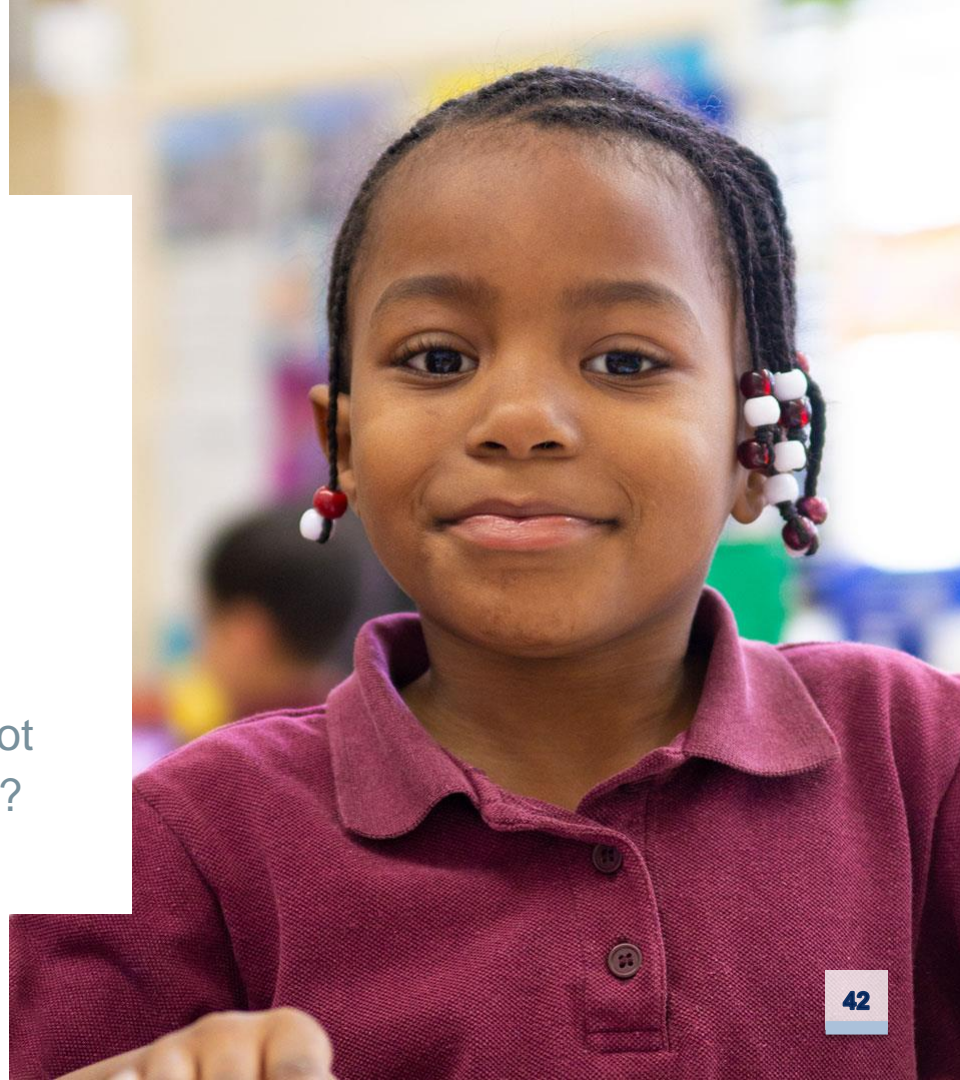
Nicholas A. Gage, Ph.D.

WestEd

Two Important Evaluation/Impact Issues

- Is fidelity of implementation being measured and, critically, is there evidence of reliability and validity?

- What is the impact on student- and school-outcomes relative to schools not participating in the CA MTSS initiative?

WestEd
WestEd.org

WestEd®
WestEd.org

Psychometric Evaluation of the Fidelity Integrity Assessment

CA-MTSS Fidelity Integrity Assessment (FIA)

SWIFT Domains, Core Features, and related SWIFT-FIA items

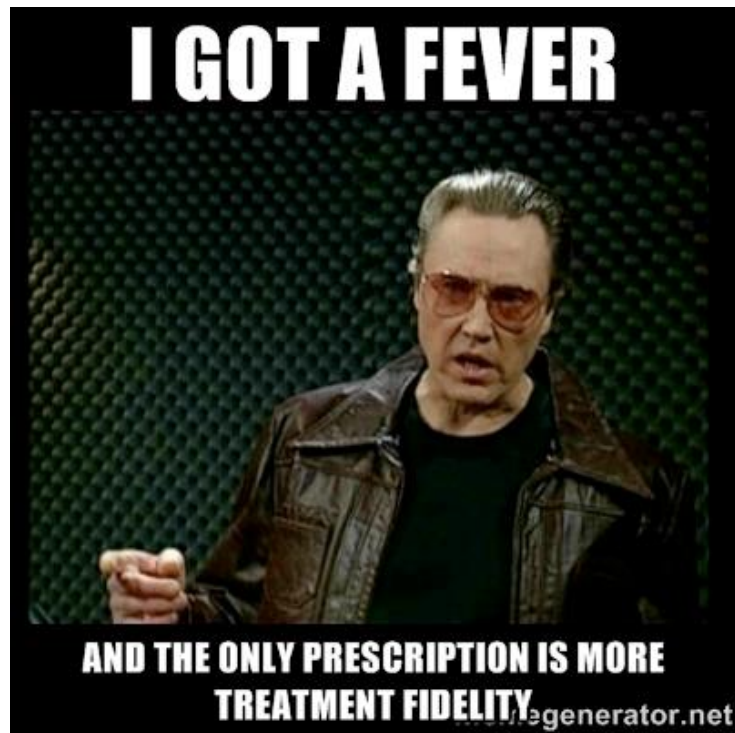| SWIFT Domain	SWIFT Core Feature	SWIFT-FIA Item / Improvement Area
Administrative Leadership	Strong and Engaged Site Leadership	1. Valued Leadership 2. Empowered Decision Making
	Strong Educator Support System	3. Educator Coaching and Learning 4. Personnel Evaluation
Multi-tiered System of Support	Inclusive Academic Instruction	5. Academic Supports 6. Academic Instruction 7. Data-based Decision Making for Academics
	Inclusive Behavior Instruction	8. Behavior Supports 9. Behavior Instruction 10. Data-based Decision Making for Behavior
Integrated Education Framework	Fully Integrated Organizational Structure	11. Tier I Instruction for All 12. Non-categorical Service Delivery
	Positive and Strong School Culture	13. Full Access for All Students 14. Shared Responsibility
Family & Community Engagement	Trusting Family Partnerships	15. Family Opportunities to Participate 16. Partnerships with Families
	Trusting Community Partnerships	17. Community Collaboration 18. Community Benefits
Inclusive Policy Structure & Practice	Strong LEA (District)/School Relationship	19. LEA (District) Support 20. LEA (District) Addresses Barriers
	LEA (District) Policy Framework	21. LEA (District) Links Initiatives 22. LEA (District) Process for RBP (research-based practice)

WestEd
WestEd.org

Scoring Fidelity Integrity Assessment v.1.3

- The current status of each item in FIA is assessed on a 0-3 scale.
  - 0 = Laying the Foundation
  - 1 = Installing
  - 2 = Implementing
  - 3 = Sustaining Schoolwide Implementation

- FIA results are summarized into
  - 1) a total score,
  - 2) individual SWIFT domain scores,
  - 3) individual SWIFT core feature scores, and
  - 4) individual item scores

WestEd
WestEd.org

Scoring Fidelity Integrity Assessment v.1.3

- Scores are determined by calculating the percentage of points for a FIA item

- The results can be used for
  - Identifying and prioritizing practices for transformation
  - Internal decision making about actions to install and implement those practices
  - Follow up on effects of action plans on practices

- The summary of results provides schools with a picture of their current implementation of MTSS Core Features.

I GOT A FEVER

AND THE ONLY PRESCRIPTION IS MORE TREATMENT FIDELITY.egenerator.net

WestEd.
WestEd.org

Study

- ## Sample
  - 274 schools completed the FIA in the spring of 2019
  - These schools were part of Cohorts 1-3 of the CA-MTSS project

- ## Descriptive Statistics
  - Means, SD, skew

- ## Reliability
  - Cronbach's alpha by feature, domain, and total score

- ## Validity
  - Confirmatory Factor Analysis of all hypothesized models

School Demographics

WestEd
WestEd.org

Table 1.

Demographic Characteristics of Schools

Demographic	%	
Grade-level		
Elementary	64.9%	
Middle	19.1%	
High	13.3%	
Other	2.7%	
Student Characteristics	M	Sd
Enrollment	598.4	477.7
% Black	6.0%	6.4%
% White	36.7%	23.5%
% Asian	9.8%	14.1%
% Hispanic	50.3%	27.3%
% Native American	9.1%	8.5%
% Female	48.3%	4.3%
% ELL	20.8%	16.0%
% SWD	13.0%	4.5%
% FRL	62.3%	24.5%

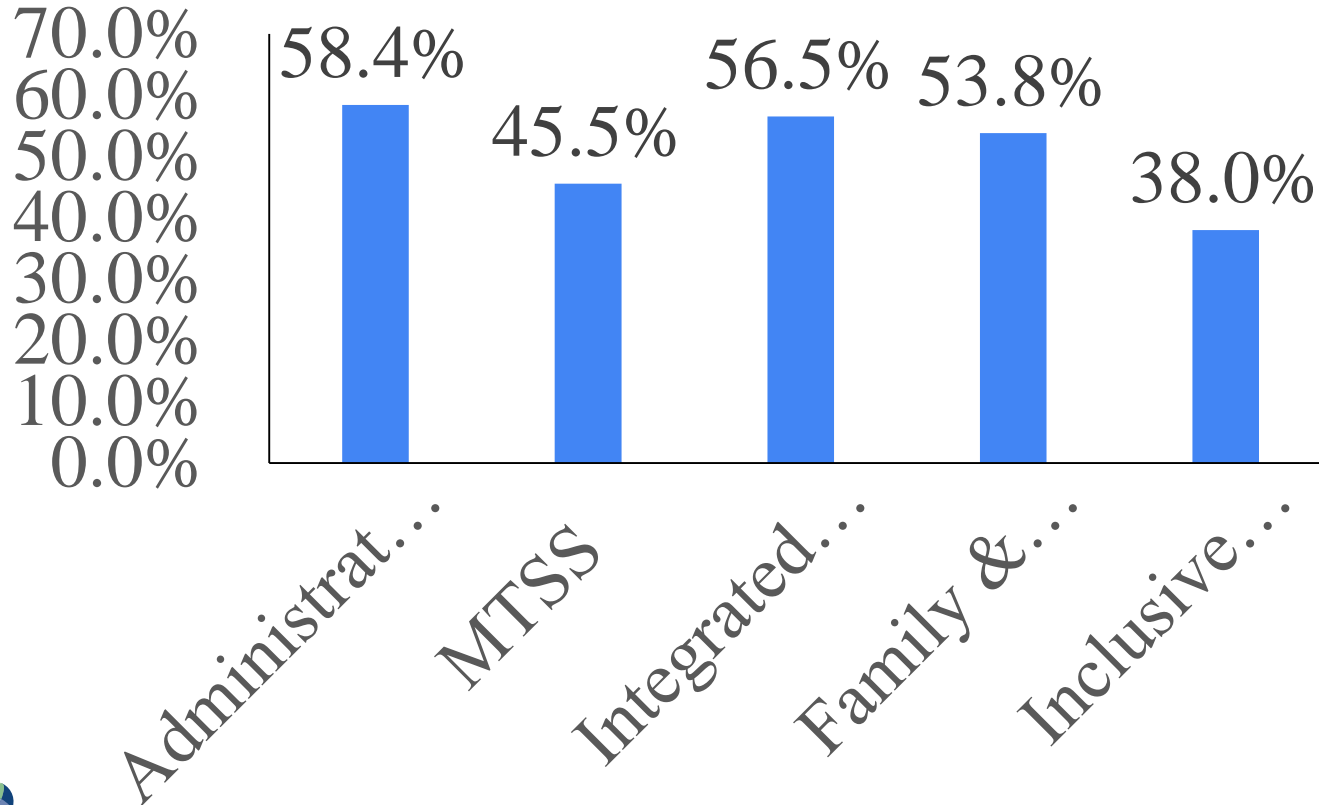Note. ELL is English language learner, SWD is student with a disability, FRL is free- and reduced-priced lunch
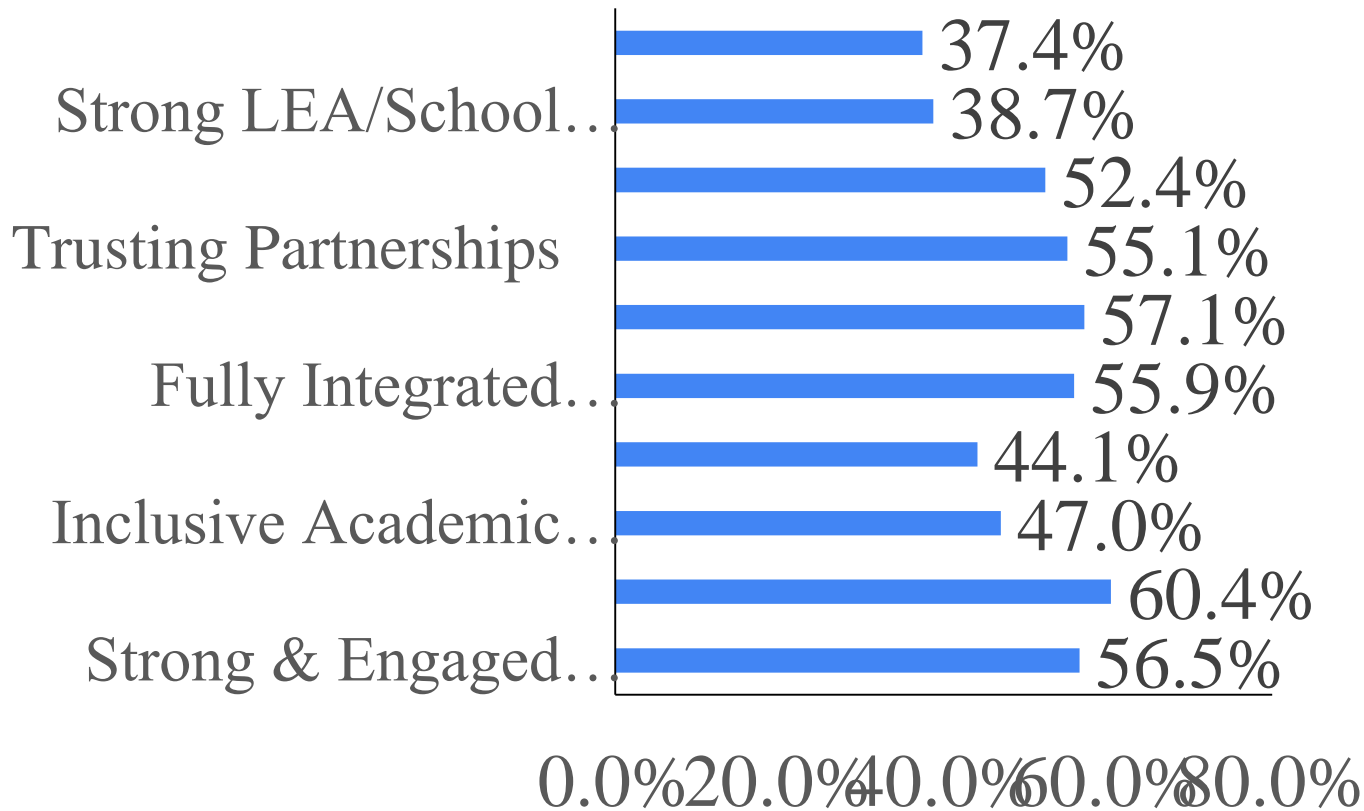
Descriptive Statistics

Mean FIA Domain Scores

Mean FIA Feature Scores

Strong LEA/School…	37.4%
	38.7%
Trusting Partnerships	52.4%
	55.1%
Fully Integrated…	57.1%
	55.9%
Inclusive Academic…	44.1%
	47.0%
Strong & Engaged…	60.4%
	56.5%

0.0% 20.0% 40.0% 60.0% 80.0%

Reliability

Table 3.
Reliability Coefficients for FIA Scores

FIA Score	a	95% CI	
		lower	upper
Full Scale Score	0.94	0.93	0.95
Administrative Leadership	0.76	0.72	0.81
MTSS	0.85	0.83	0.88
Integrated System of Support	0.85	0.82	0.88
Family & Community Engagement	0.77	0.73	0.82
Inclusive Policy Structure & Practice	0.88	0.86	0.91
Strong & Engaged Site Leadership	0.74	0.68	0.8
Strong Educator Support System	0.7	0.63	0.77
Inclusive Academic Instruction	0.78	0.73	0.82
Inclusive Behavior Instruction	0.83	0.79	0.86
Fully Integrated Organizational Structure	0.73	0.66	0.79
Positive & Strong School Culture	0.77	0.72	0.83
Trusting Partnerships	0.83	0.8	0.87
Trusting Community Partnerships	0.64	0.55	0.72
Strong LEA/School Relationships	0.78	0.73	0.83
LEA Policy Framework	0.79	0.74	0.84

Validity

Table 4.
Model Fit Statistics

| | | | | | Hierarchical | |
Statistic	Total Score (g)	Domain (D)	Feature (F)	F → g	D → g	F → D → g
X^2	894.92	472.85	278.67	484.92	490.48	318.42
df	209	199	164	199	204	194
p-value	0.000	0.000	0.000	0.000	0.000	0.000
CFI	0.78	0.91	0.96	0.91	0.91	0.96
TLI	0.75	0.90	0.95	0.89	0.89	0.95
RMSEA	0.11	0.07	0.05	0.07	0.07	0.05
SRMR	0.07	0.05	0.04	0.05	0.05	0.04

Notes. CFI = comparative fit index, TLI = Tucker–Lewis index, RMSEA = root mean square error of approximation, SRMR = standardized root mean square residual

WestEd
WestEd.org
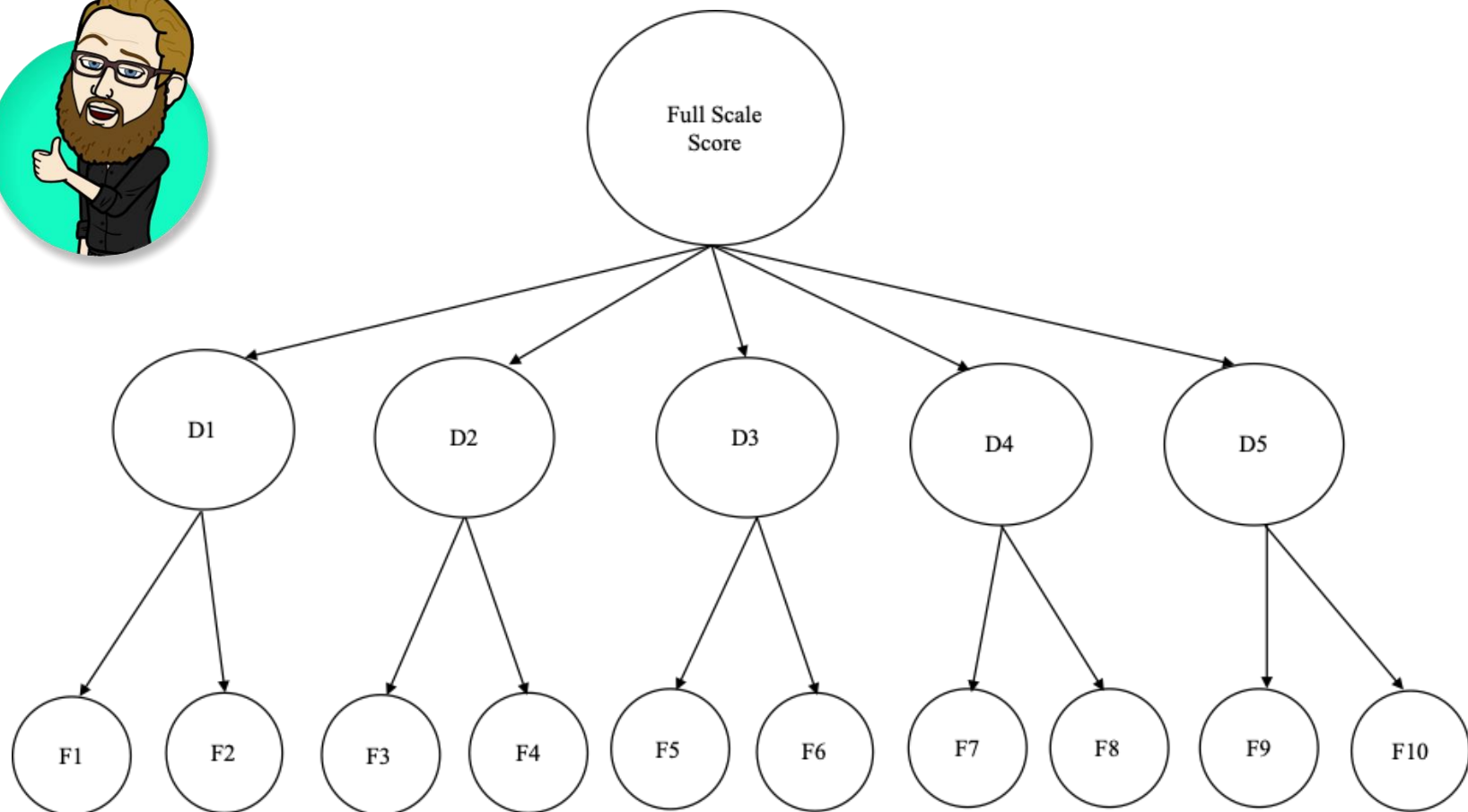
Post-Hoc Quasi-Experimental Design Study

Purpose and Research Questions

- This study explored the effect of CA MTSS on school-level performance when compared to schools not participating in CA MTSS

- Research Questions:
  - Is there a statistically significant difference in school-level reading and mathematics performance between treatment groups?
  - Is there a statistically significant difference in school-level suspensions between treatment groups?
  - Is there a statistically significant difference in school-level chronic absences between treatment groups?

Data

- The Fidelity Inventory Instrument (FIA) was collected from 273 schools during the spring of the 2018-2019 school year

- School-level data was collected from CDE website (https://www.cde.ca.gov/ta/ac/cm/datafiles2019.asp) for the 2018-2019 school year. Data sets contained performance for ~10,000 schools

- Merged the FIA data with CDE public school-level data, including demographics

- Final sample included ~220 schools using FIA matched on all demographics and outcomes

WestEd.org

Data Analysis

- We used propensity score matching (PSM) to identify a baseline-equivalent comparison group

- We used change scores to estimate treatment effects

- We used multilevel models for all treatment effect estimates to control for nesting of schools with districts and counties.

- Included all covariates in the models to account for any potential remaining confounds after PSM

- Estimated impact by treatment condition

Propensity score matching illustration
Program ducks   Possible comparison ducks
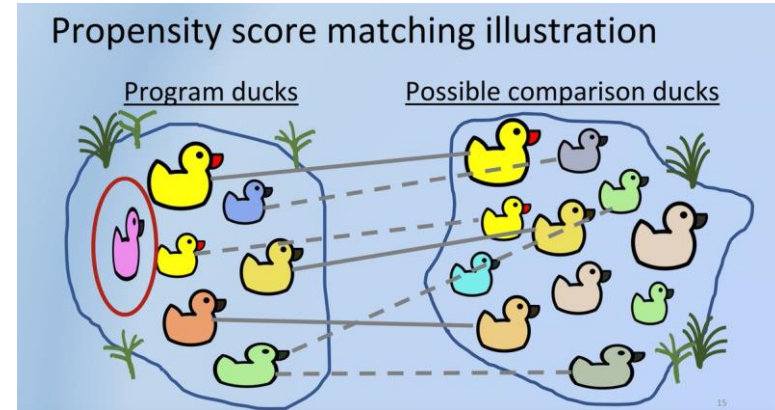
Chronic Absences

Table 1.
CA MTSS Impact on Chronic Absenteeism

Predictor	Estimate	Std. Error	p
Intercept	5.22	3.80	0.170
MTSS	-1.79	0.77	0.020*
Enroll	0.00	0.00	0.962
% Black	-9.05	6.64	0.174
% White	-8.30	3.77	0.028
% Asian	-6.25	4.28	0.146
% Hispanic	-7.64	3.51	0.030
% Native American	19.54	5.46	0.000
% Female	3.08	4.44	0.488
% English Learners	2.19	2.37	0.356
% Students with Disabilities	5.20	4.31	0.228
% Economically Disadvantaged	-1.52	1.39	0.275
[a]High School	-12.92	2.64	0.000
Middle School	0.40	0.50	0.419
Other Grade Configuration	1.25	1.25	0.3161`
FIA	3.53	1.44	0.014*

Note. [a] Reference group is elementary

Predicted values of change
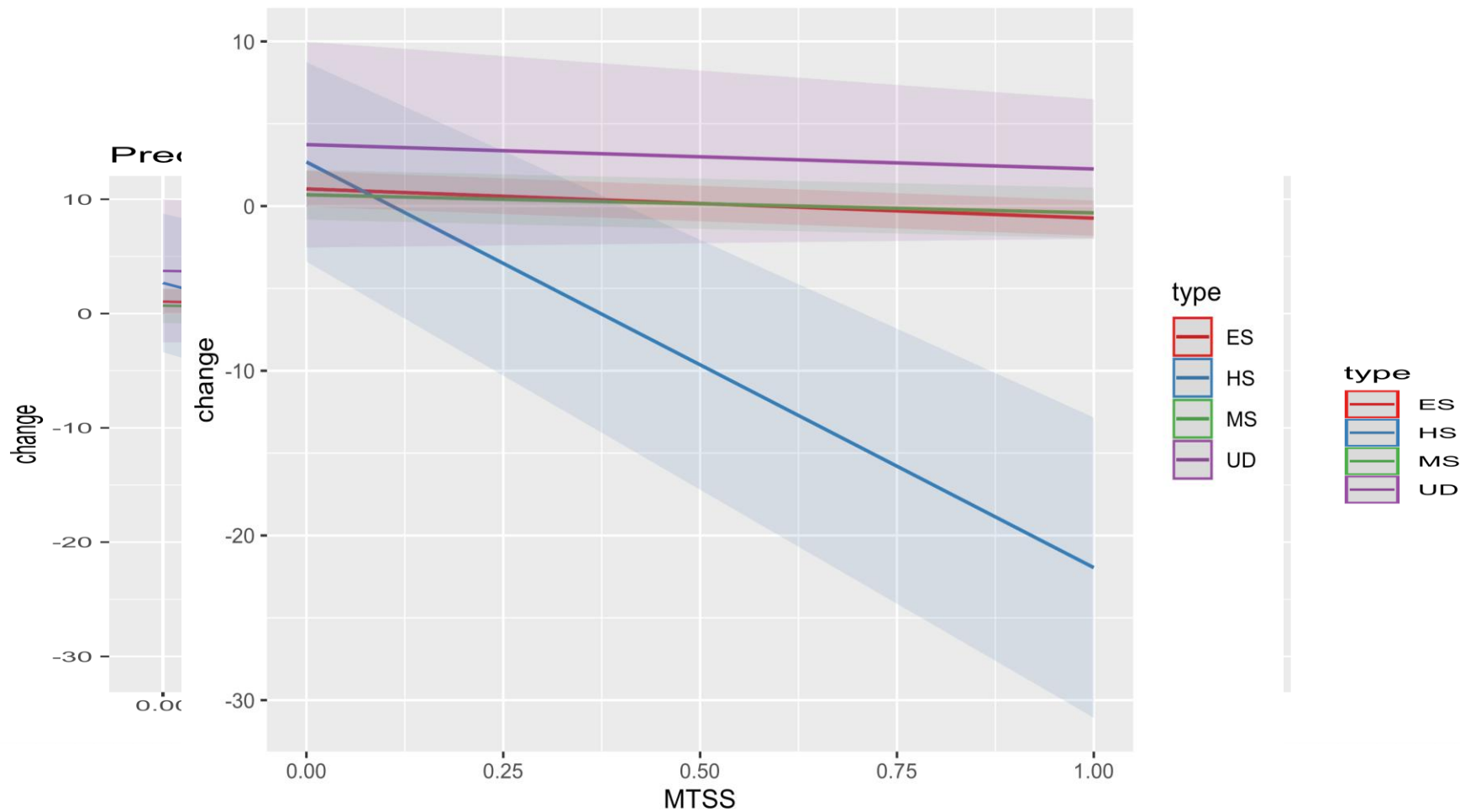
Important Considerations from These Studies

- Fidelity can be measured, and psychometric evaluations can (should) be conducted

- Post-hoc quasi-experimental design analysis can be conducted

- BUT… CONTEXT MATTERS
  - The pandemic limits our ability as evaluators to look back and see the longitudinal change!
  - School-wide initiatives take 3-4 years to actualize results at the school-wide level
  - Therefore, these analyses are only examples of possibilities

- CA Initiatives should design experimental studies A PIORI!

WestEd
WestEd.org