Monitoring Core Features of Tier 2 Systems and Practices in High Schools

Angus Kittelman
Mimi McGrath Kato

3.30.23 5:00 – 6:00 pm
River Terrance 2

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ECS EDUCATIONAL AND COMMUNITY SUPPORTS

Session Overview

- Describe differences between measuring *systems* and *practices* within MTSS

- Identify *core features* of Tier 2 systems and practices

- Describe how measurement of Tier 2 systems and practices are *unique in high schools*

- Share *novel research* in high schools

Acknowledgements

- Co-presenters: K. Brigid Flannery & M. Kathleen Strickland Cohen

- 3-year IES-funded development and innovation project focused on adapting a Tier 2 intervention for high schools (PI: Flannery)
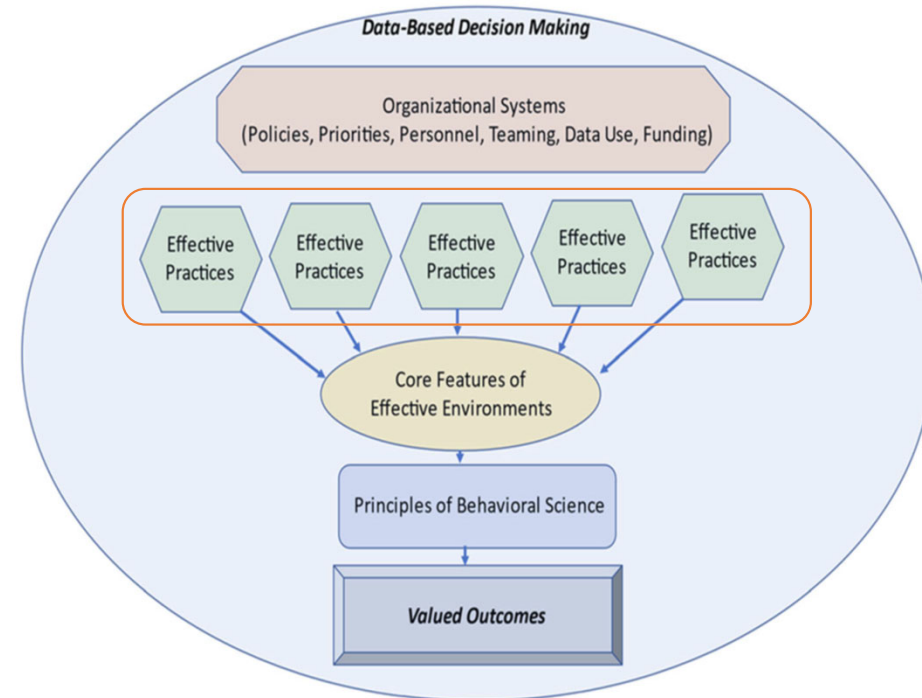
Questions

- *What are the differences between implementing systems and practices within an MTSS framework?*

- *Which come first and why?*

Practices vs. Systems

- Practices identify…
  - Actions of implementers
  - Populations
  - Characteristics/skills expected by implementers
  - Contexts for implementation
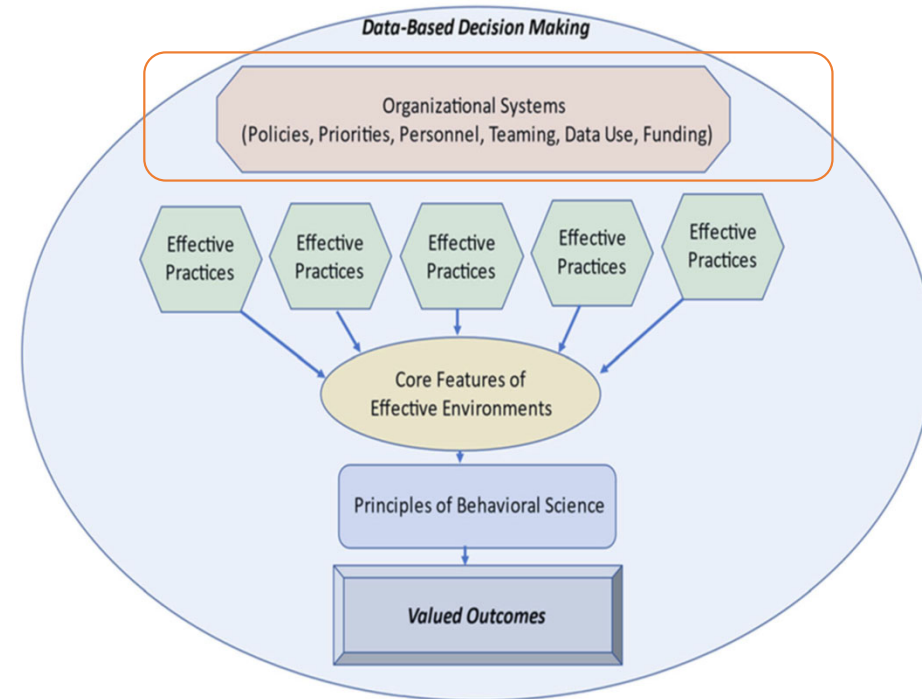 - Expected outcomes

Horner & Kittelman (2021)

Practices vs. *Systems*

- Systems are…
  - Structural components & processes to facilitate implementation of practices
  - Build supportive infrastructures that embed practices into routines in organizations
  - Safeguards that protect against abandonment of practices

Horner & Kittelman (2021)

Systems..

Positive Behavioral Interventions and Supports Implementation Blueprint:
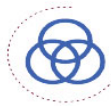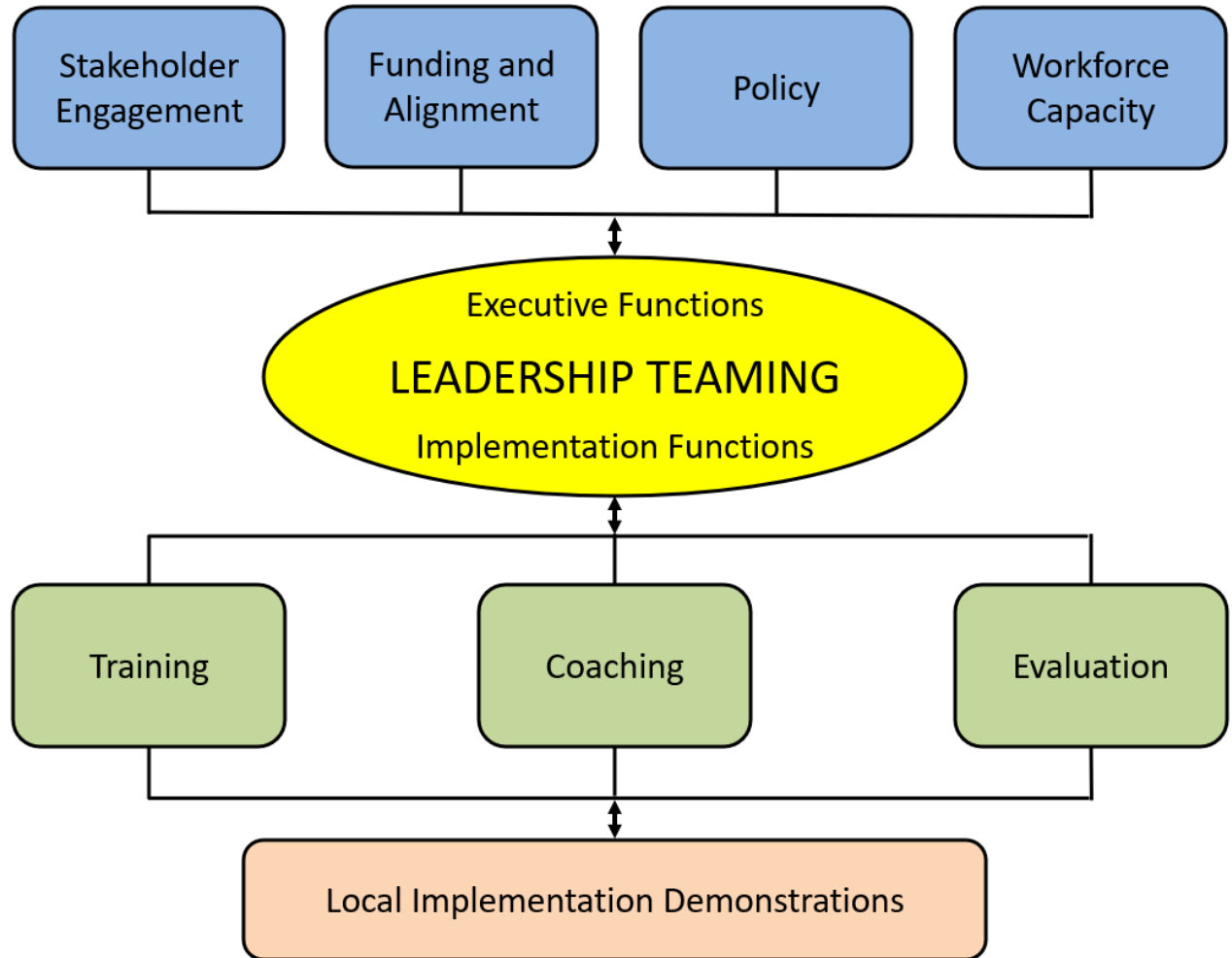
PBIS District Systems Fidelity Inventory (DSFI)

Technical Assistance Center on Positive Behavioral Interventions and Supports

U. S. Department of Education, Office of Special Education Programs

Version 0.2 2020 September 28

Stakeholder Engagement

Funding and Alignment

Policy

Workforce Capacity

Executive Functions

LEADERSHIP TEAMING

Implementation Functions

Training

Coaching

Evaluation

Local Implementation Demonstrations

Questions

- *Are Tier 1 systems important for implementing Tier 2 practices and systems?*

- *If so, what systems are needed at Tier 1 to build <u>supportive infrastructures</u> for Tier 2?*

Readiness for Advanced Tiers?

- ✓ Tier 1 school team trained/active
- ✓ Tier 1 implemented with fidelity for 1 to 2 years
- ✓ Tier 1 classroom systems established and used by school personnel with fidelity
- ✓ Implementing and using a data collection and decision systems
- ✓ Data indicate positive effects of Tier 1 implementation on student outcomes

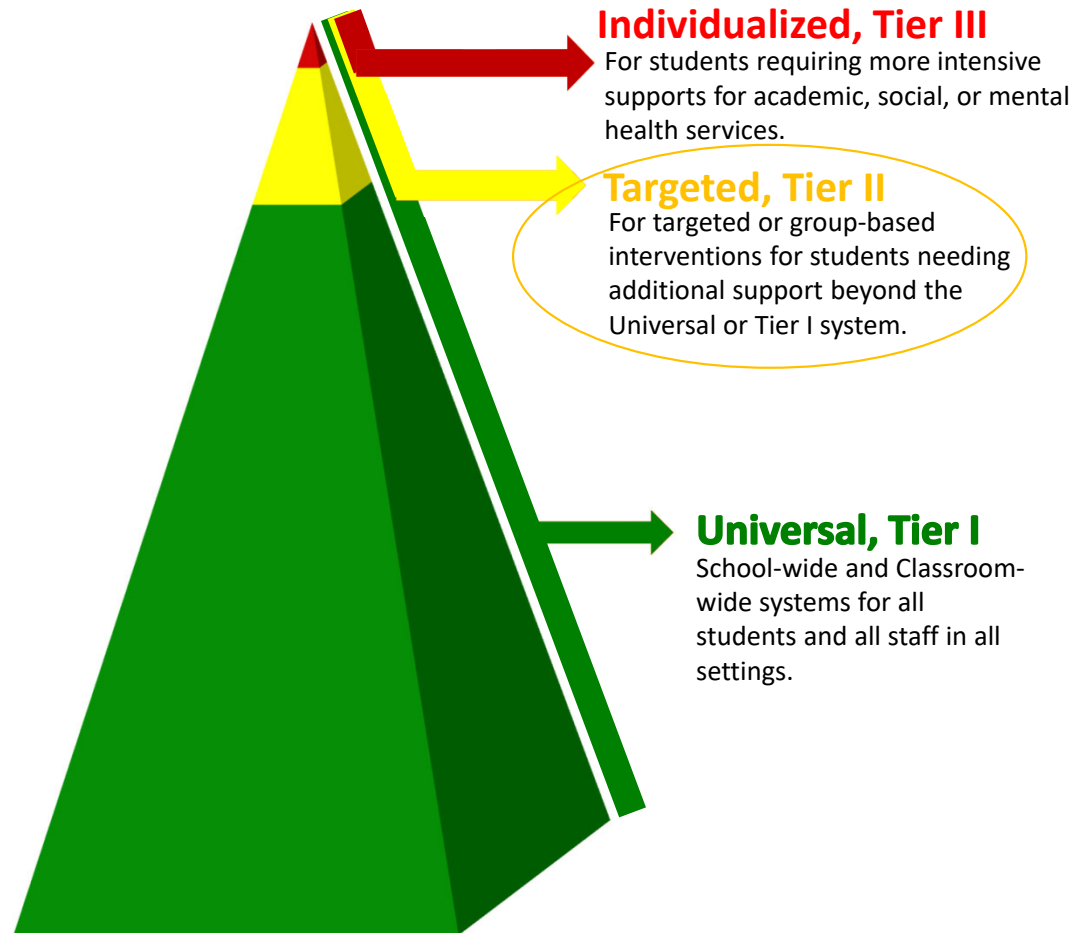WHEN DO SCHOOLS RECEIVE TIER 2 AND 3 PBIS TRAINING?

ANGUS KITTELMAN, KENT MCINTOSH, STERETT H. MERCER, LAUREN EVANOVICH, KIM GULBRANDSON, MELISSA NANTAIS, JENNIFER NORTON, GORDON WAY, SARA IZZARD, & RHONDA N. T. NESE

October 2022

Why Tier 2?

Tier II is an additional layer of prevention to reduce number of students in need of individualized supports

- More <u>time and instruction</u> for skill development

- More <u>structure and predictability</u>
  (during a routine/subject or across the day)

- Structured <u>performance feedback</u>

- Development of <u>self-management</u> skills
  (self-monitoring, self-instruction, self-correction)

Individualized, Tier III
For students requiring more intensive supports for academic, social, or mental health services.

Targeted, Tier II
For targeted or group-based interventions for students needing additional support beyond the Universal or Tier I system.

Universal, Tier I
School-wide and Classroom-wide systems for all students and all staff in all settings.
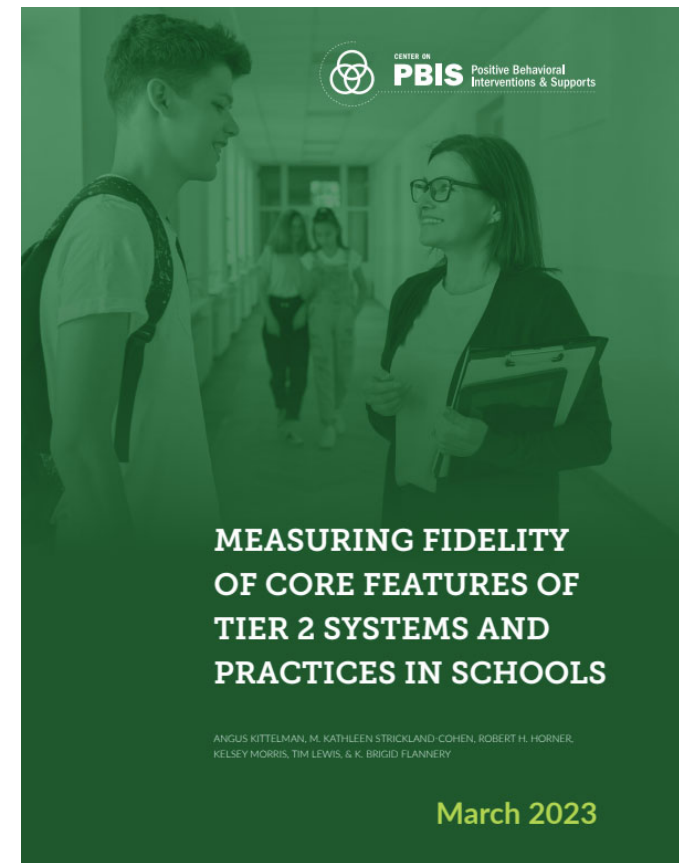
Core Features of Tier 2 Organizational Systems

- Efficient Tier 2 team with behavioral expertise

- Use of data-based decision making (fidelity and outcome)

- Student screening and identification

- Training and ongoing support (staff, students, families)

- Coordinated with Tier 1 and Tier 3 systems
  - Teaching/Training
  - Acknowledgement

www.pbis.org/pbis/tier-2

MEASURING FIDELITY OF CORE FEATURES OF TIER 2 SYSTEMS AND PRACTICES IN SCHOOLS

ANGUS KITTELMAN, M. KATHLEEN STRICKLAND-COHEN, ROBERT H. HORNER, KELSEY MORRIS, TIM LEWIS, & K. BRIGID FLANNERY

March 2023

For More Information on Tier 2 Systems Components

BEP-FIM

- Measures core components of CICO systems
  - ✓ Tier 2 or Tier 2/3 team
  - ✓ Student identification systems
  - ✓ Data system
  - ✓ Data-based decision making

Check-in, Check-out Fidelity of Implementation Measure (BEP-FIM)
Scoring Guide

School:_____ Date:_____ Pre:_____ Post:_____

District:_____ State:_____ Data collector:_____

Evaluation Question	Data Source P = permanent product; I = Interview; O= Observation	Score 0-2
1. Does the school employ a CICO coordinator whose job is to manage the CICO (10-15 hours per week allocated) (0 = No CICO Coordinator, 1 = CICO coordinator but less than 10 hours per week allocated, 2= CICO Coordinator, 10-15 hours per week allocated)	Interviews with Administrator & CICO Coordinator — I	
2. Does the school budget contain an allocated amount of money to maintain the CICO ?(e.g. money for reinforcers, DPR forms, etc. (0 = No, 2 = Yes)	CICO Budget Interviews — P / I	
3. Do students who are referred to CICO receive support within a week? (0 = more than 2 weeks between referral and CICO support, 1 = within 2 weeks, 2 = within a week)	Interview CICO Referrals & CICO Start dates — P / I	
4. Does the administrator serve on the CICO team or review CICO data on a regular basis? (0 = no, 1 = yes, but not consistently, 2 = yes)	Interview — I	
5. Do 90% of CICO team members state that the CICO system has been taught/reviewed on an annual basis? (0 = 0-50%, 1 = 51-89%, 2 = 90–100%)	Interview — I	
6. Do 90% of the students on the CICO check-in daily? (Randomly sample 3 days for recording) (0 = 0-50%, 1 = 51-89%, 2 = 90–100%)	CICO recording form — P	
7. Do 90% of students on the CICO check-out daily? (Randomly sample 3 days for recording) (0 = 0-50%, 1 = 51-89%, 2 = 90–100%)	CICO recording form — P	
8. Do 90% of students on the CICO report that they receive reinforcement (e.g. verbal, tangible) for meeting daily goals? (0 = 0-50%, 1 = 51-89%, 2 = 90–100%)	Interview students on CICO — I	
9. Do 90% of students on the CICO receive regular feedback from teachers? (randomly sample 50% of student DPR's across 3 days) (0 = 0-50%, 1 = 51-89%, 2 = 90–100%)	CICO Daily Progress Reports — P	
10. Do 90% of students on the CICO receive feedback from their parents? (0 = 0-50%, 1 = 51-89%, 2 = 90–100%)	CICO Daily Progress Reports — P	
11. Does the CICO coordinator enter DPR data daily? (0 = no, 1 = 1-4 x a week, 2 = daily)	Interview — I	
12. Do 90% of CICO team members indicate that the daily CICO data is used for decision-making? (0 = 0-50%, 1 = 51-89%, 2 = 90–100%)	Interview — I	

Horner, Todd, Filter, McKenna, Benedict, & Hawken, 2004

Core Features of Tier 2 Practices

Standardized Routines and Procedures

Continuously Available

Function Based

Explicit Instruction

Progress Monitoring & Feedback

School-family communication

Fading strategies

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Measures Core Components of CICO Practice Implementation

Instructions:
- Watch the CICO Facilitator provide a morning check-in with 1 randomly selected student.
- Mark Y, N, or N/A for each of the listed indicators.
  - **Y** if observed   **N** if not observed   **N/A** if not applicable for the situation

Adherence & Quality Indicators	Y	N	N/A
1. Facilitator greeted student			
1.a) Appropriate tone & non-verbal behavior (e.g., facial expression)			
1.b) Smooth/automatic			
2. Facilitator asked student for Home Report from previous day (could be N/A if student was absent the previous day)			
2.a) Appropriate tone & non-verbal behavior (e.g., facial expression)			
2.b) Smooth/automatic			
3. Facilitator provided a DPR and/or prompted student to get a DPR/folder.			
4. Facilitator verbally reminded student of 1 or more expectations to work on or prompted student to identify 1 or more expectations to be met.			
4.a) Appropriate tone & non-verbal behavior (e.g., facial expression)			
4.b) Smooth/automatic			
4.c) Specific ("Remember, today you are working on Safe, Respectful & Responsible)			
4.d) Responsive			
5. Facilitator verbally identified/discussed student goal for day (e.g., % or number of points or smile faces to earn)			
5.a) Appropriate tone & non-verbal behavior (e.g., facial expression)			
5.b) Smooth/automatic			
5.c) Specific (e.g., "Today your goal is set for 80%. Do you think you can earn this?")			
5.d) Responsive			
6. Facilitator verbally checked that the student and/or materials were ready for class			
6.a) Appropriate tone & non-verbal behavior (e.g., facial expression)			
6.b) Smooth/automatic			
6.c) Specific ("You've got your DPR, and your homework. Have a great day!")			
6.d) Responsive ("If you haven't eaten breakfast yet, go get something before class.")			

PBIS Check-In/Check-Out Fidelity Checklist

School: _____   Date: _____

Student: _____   Fidelity Checker: _____

1. Student checked-in with a designated mentor before school started.	Yes	No	did not observe
2. Check-in mentor positively acknowledged student at check-in, gave student a daily progress report, and ensured that the student had materials needed for first class.	Yes	No	did not observe
3. Student gave daily progress report to each teacher at the beginning of designated class periods.	Yes	No	did not observe
4. Teachers positively acknowledged student when given daily progress report.	Yes	No	did not observe
5. Teachers provided contingent feedback at end of class period.	Yes	No	did not observe
6. Student checked-out with designated mentor at the end of the day.	Yes	No	did not observe
7. Student took daily report home to get parent signature.	Yes	No	did not observe
8. Student's Check-In/Check-Out points have been recorded daily.	Yes	No	did not observe
9. Student's Check-In/Check-Out data is reviewed by the PBIS Facilitator at least every two weeks.	Yes	No	did not observe
10. Process in place for student's Check-In/Check-Out to be: (a) faded to self-management if it is effective, or (b) linked to function-based support if it is not effective.	Yes	No	did not observe

adapted from Horner, Todd, Filter, McKenna, Benedict, & Hawken, 2004

Acknowledgement: Dr. Tim Lewis

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High School Implementation of SWPBIS

HS Contextual Influences → Key Foundational Systems → Core Features of Implementation → Key HS Focus Areas

Size
Culture
Developmental Level

Data
Leadership
Communication

SOCIAL BEHAVIOR
ACADEMIC SUCCESS
School Engagement and Success
PERSONALIZA-TION / SCHOOL BELONGING
FRESHMEN SUPPORT
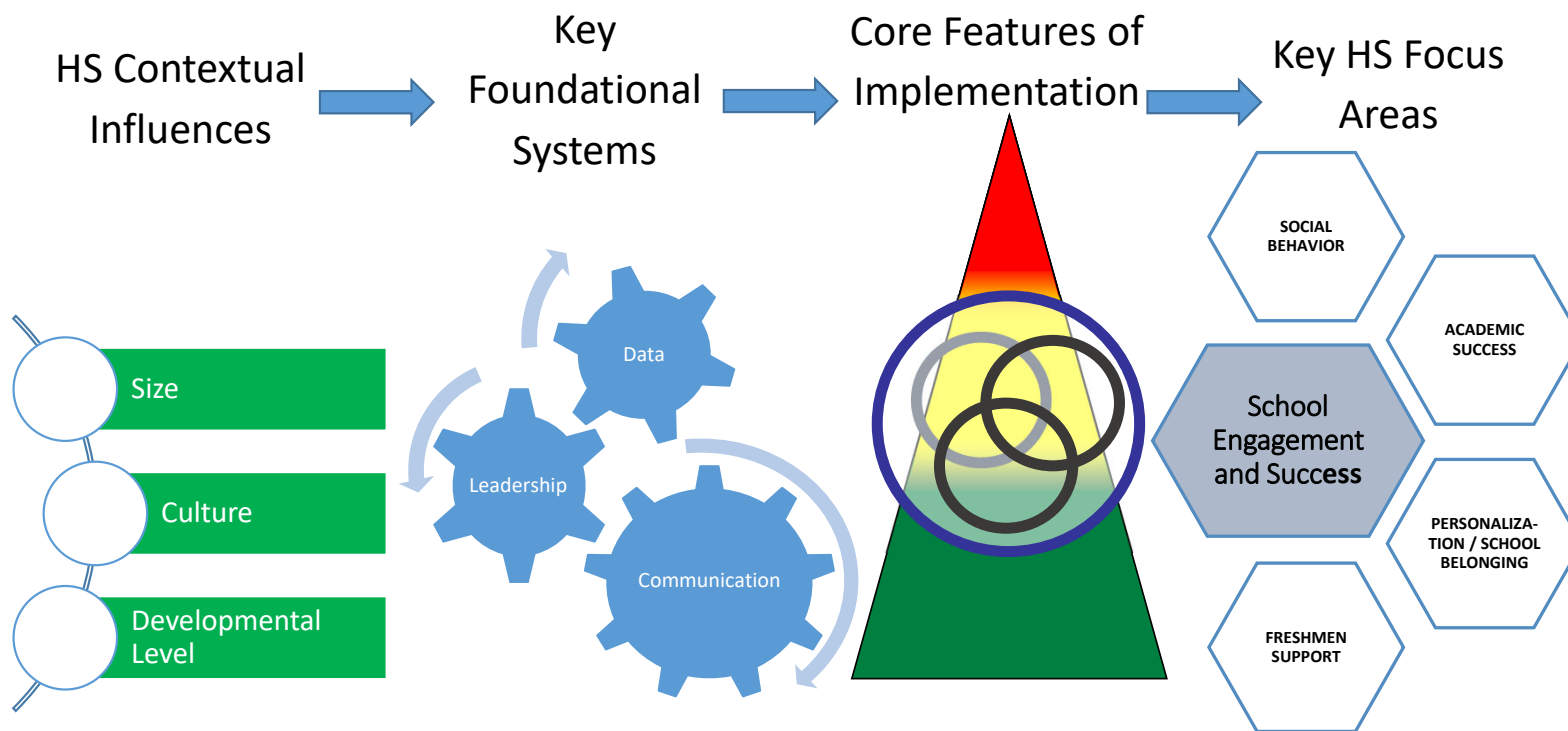
Flannery & Kato, 2012

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CICO-Secondary (PI: K. Brigid Flannery)

Preserve
Core
Features
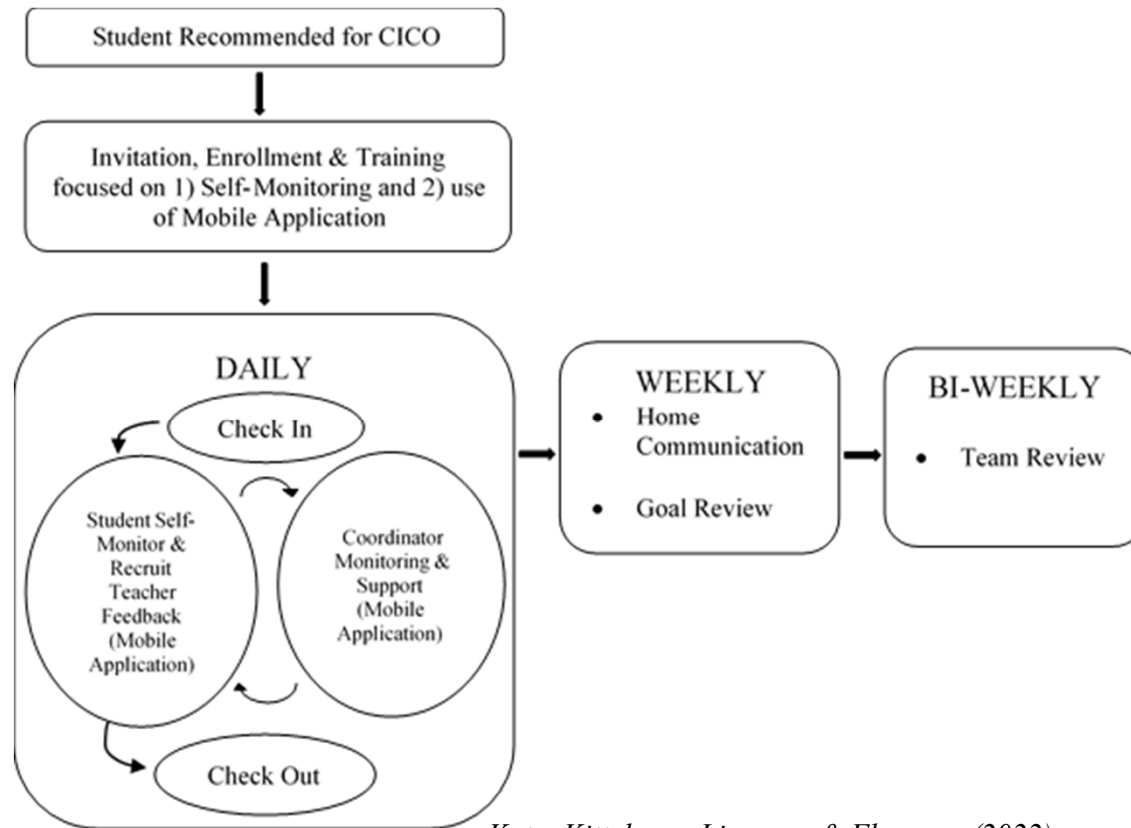
Kato, Kittelman, Lissman, & Flannery (2022)

CICO-Secondary (PI: K. Brigid Flannery)

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Adjust for HS Context

Developmental Level	School Size
Student as partner (goal setting, self regulation topic of training, revisited during intervention)	Multiple Check in/Check out locations
Self-Scoring	Multiple nomination pathways – utilize existing systems
Weekly caregiver contact	Teacher training and follow up

1.Set Behavior Goals
2.Self Monitor
SELF-REGULATION PROCESS
3.Recruit Teacher Feedback
4.Self Evaluate
5.Adjust Behavior

< CICO Points for Angus1 Acorn
Please rate yourself
Did I greet my teacher?
Yes   No
Respect Self
On time
2 Great   1 Okay   0 Needs Work
Respect Others
Ready to work
2 Great   1 Okay   0 Needs Work
SAVE AND HAND TO TEACHER
NO TEACHER AVAILABLE

Compare Scores
Thursday, August 22, 2019
Science:
for TS3 Student
TEACHER STUDENT
Teacher Greeted?   Y   Y
Self Respect   1   2
Respect Others   2   1
Respect Envir...   1   2

Core Feature	Tier 1 and 2 Organizational Systems Fidelity Measures			
	TFI Tier 1	TFI Tier 2	CICO-Secondary Intervention Development Checklist	CICO Fidelity of Implementation Measure (CICO-FIM)
Tier 2 Organizational Systems				
Nomination Protocol		X	X	X
Tier 2 Team		X	X	X
Data System	X		X	X
Data Decision-Making	X	X	X	X
Professional Development	X	X	X	X
Fading Procedures			X	
Coordinated with Tiers 1 and 3	X	X		
Tier 2 Practice Fidelity Measures				
	Check-In Facilitator/ Coordinator Fidelity Checklist	Check-Out Facilitator/ Coordinator Fidelity Checklist	Teacher/Student Fidelity Checklist or Electronic Point Card	Caregiver Progress Reports
Tier 2 Practices				
Continuously Available	X	X	X	
Function Based			X	
Explicit Instruction	X	X	X	
Iterative Feedback	X	X	X	X
Corrective Consequences		X	X	
Family-School Communication				X
Fading Procedures				

CICO-Secondary Evaluation Studies

1. **Kittelman et al. (2019)**
   - Piloted with 5 students in 1 high school
   - Positive effects for student who participated with high fidelity
     - Increased academic engagement; decreased disruption

2. **Kato et al. (2023)**
   - Implemented with 23 students (44% w/IEP) in 2 high schools
   - Significant correlation between student/teacher fidelity and behavioral expectations (88% fidelity overall)
   - Majority of teacher comments were positive or positive/corrective

3. **Kittelman et al. (under review)**
   - Single-case experimental study with 3 student (2 w/IEPs)

"Great turnaround, thanks for working hard after your break!"

Single-Case Study: CICO-Secondary

(Kittelman, Lissman Cohen, Kato, Flannery, Horner, Izzard, St. Joseph, & Mowery., under review)

Single-Case Study

Research Questions:
1. Can CICO-Secondary be implemented with fidelity?
2. Is there a functional relation between implementation of CICO-Secondary and improved student outcomes?
3. Do students and school personnel perceive CICO-Secondary to be socially acceptable?

Setting
- One public high school in the pacific northwest
- Implemented CICO-Secondary during 2019-20, 2021-22 school years

Participant	Characteristics	A-Day	B-Day
Tracy	9th grade, White, female, no IEP	English	Science
John	9th grade, White, male, with IEP	Algebra	Science
Dan	9th grade, White, male, with IEP	Social Studies	Science

Measurement of Systems and Practice Fidelity Part 1.

- Systems and CICO fidelity
  - **Systems fidelity**
    - 2019-20 TFI Tier 1 fidelity = 83%
    - 2019-20 TFI Tier 2 fidelity = 77%
    - CICO-Secondary Intervention Development Checklist = 80%
  - **CICO fidelity**
    - Check-in (x1)
      - Greet teacher (x4)
      - Self-rate (x4)
      - Teacher-rate (x4)
    - Check-out (x1)

Setting and Questions

- 1 high school in Pacific Northwest (1,391 students)

Student	Grade	Gender	Race	IEP	A-Day	B-Day
Tracy	9	F	White	No	English	Science
John	9	M	White	Yes	Algebra	Science
Dan	9	M	White	Yes	Social Studies	Science

- Personnel
  - 5 teachers (2 per student): John, Dan same science teacher but different periods
  - 3 coordinators: 2 White females, 1 Black male
- RQs
  - *CICO-Secondary implemented with fidelity?*
  - *Functional relation between CICO-Secondary and improved student outcomes?*
  - *Students and staff perceive CICO-Secondary as socially acceptable?*

Method

- Observation
  - 2 school years due to COVID-19 (2019-20 & 2021-22)
    - John and Dan (Feb 2022 – March 2020)
    - Tracy (April 2022 – June 2022)
- Measures

Fidelity	Behavior	Acceptability
3 components per class 1) Student greet 2) Student self-rate 3) Teacher self-rate 2 components per day 1) Morning check-in 2) Afternoon check-in	Academic engagement 1. 7/10-s whole interval Disruptive behavior 2. 10-s partial interval	9-item self-report measure (1 = strongly disagree; 6 = strongly agree)

Method

- Interobserver agreement (IOA)
  - Collected across 27% of students/phases
    - IOA 94% for academic engagement
    - IOA 96% for disruption

- Procedures
  - Baseline (A), CICO-Secondary training, intervention (B)

- Design and analysis
  - Nonconcurrent multiple baseline design
  - Visual analysis
  - Between-case standardized mean difference (BC-SMD) (Pustejovsky et al., 2014)

Results

- RQ1: Procedural Fidelity
  - Overall mean/range
    - Tracy = 70.9%; rng = 50 - 100%
    - John = 77.5%; rng = 50 - 100%
    - Dan = 86.9%; rng = 50 - 100%

Student	Days of Participation	Check-In	Greet Teacher	Self-Rate	Teacher Rate	Check-Out
Tracy	13	100%	62%	60%	73%	100%
John	12	100%	62%	75%	79%	100%
Dan	6	100%	72%	83%	83%	100%

Results

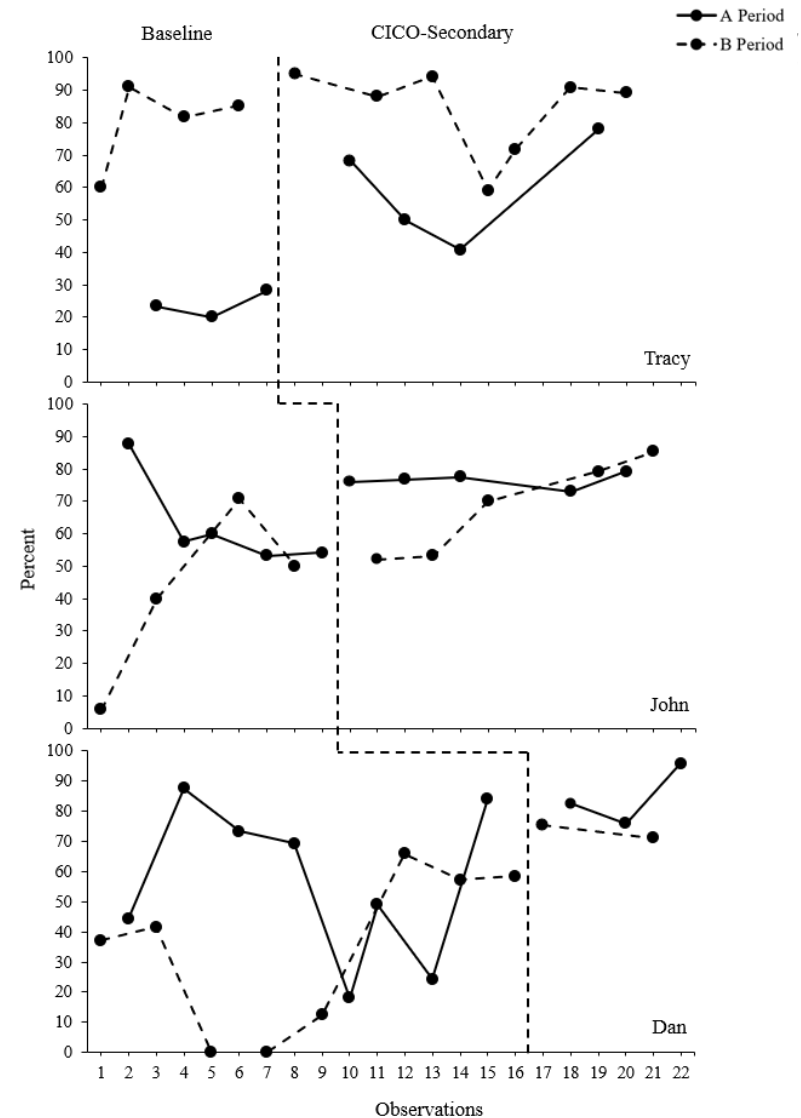- **RQ2: Student Outcomes**
  - Academic engagement
    - Tracy: Baseline = 55.6%; Intervention = 75%
    - John: Baseline = 53.2%; Intervention = 72.2%
    - Dan : Baseline = 45.1%; Intervention = 80.1%
  - Disruption
    - Tracy: Baseline = 4.3%; Intervention = 2.6%
    - John: Baseline = 9.8%; Intervention = 7.2%
    - Dan: 86.9: Baseline = <1%; Intervention = 5.1%
  - Effect size
    - BC-SMD: 1.05, *SE* = 0.21; CI [0.63, 1.47]

Recommendations for Implementation of Tier 2 Systems in High Schools

- Ensure core components of Tier 1 system are in place

- Take time to build buy in with implementing staff

- Ensure sufficient FTE available and provide thorough training

  - Protected time (check ins/outs)

  - Flexible time (student/teacher/caregiver follow up as needed)

- Remember to progress monitor … ask, "is it working?"

- Regularly assess and work to improve/maintain fidelity (TFI, BEP-FIM)

Recommendations for Implementation of Tier 2 Practices in High Schools

- Train teachers in person (email is insufficient)

- Adjust for your context but keep core features in place

- Ensure teams have system to summarize fidelity and outcome data

- Respond quickly to low fidelity (have an available list of strategies)
  - Peer support
  - Re-training
  - Adjust acknowledgements as needed

- Establish decision rules to evaluate whether implementation/ adaptions are effective
  - Increase in performance
  - Increase in fidelity

Resources of Installation of Tier 2 Organizational Systems & Practices

1. https://www.pbis.org/resource/check-in-check-out-a-targeted-intervention

2. https://www.pbis.org/resource/social-skills-instruction-at-tier-2

3. https://www.pbis.org/resource/classroom-integrated-academics-and-behavior-brief

4. https://www.pbis.org/resource/tier-2-systems-readiness-guide

5. https://www.pbis.org/video/tier-2-overview-readiness-data-decisions-and-practices-sctg-webinar

6. https://www.pbis.org/video/session-i1-pbis-forum-2021-overview-logic-of-district-wide-implementation

7. https://www.pbis.org/video/session-f1-pbis-forum-2021-essential-features-of-tier-2-supports-reflections-from-district-wide-implementation

8. https://www.pbis.org/resource/tiered-decision-guidelines-for-social-behavioral-and-academic-behavior-guidance-for-establishing-data-based-teams-across-the-tiers

9. https://www.pbis.org/video/session-f2-pbis-forum-2021-small-group-social-skills-instruction-self-management

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- Kato, M. M., Kittelman, A., Flannery, K. B., & Cohen Lissman, D. (2022). Adapting and monitoring daily CICO implementation in high schools. *Preventing School Failure*, *67*(1), 48-57. https://doi.org/10.1080/1045988X.2022.2106933

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Session Review

- ✓ Identified differences between measuring *systems* and *practices* within MTSS

- ✓ Identified *core features* of Tier 2 systems and practices

- ✓ Described how measurement of Tier 2 systems and practices are *unique in high schools*

- ✓ Shared *novel research* in high schools (CICO Secondary Single Case study)

save the date

National PBIS Leadership Forum

www.pbisforum.org

October 26-27, 2023

Hilton Chicago, Chicago, IL

Mark your calendar now

for the 2023 National PBIS Leadership Forum!

This two-day forum is designed to support school, state, regional, and local educational leaders, together with community and family partners, to increase the effectiveness of school environments through PBIS. Sessions and topic-specific strands will provide guidance and tools for strengthening prevention-based systems that support the social, emotional, and behavioral needs of students to ensure engagement in learning.

Registration opens in May!

CENTER ON
PBIS Positive Behavioral Interventions & Supports

The National PBIS Leadership Forum is a technical assistance activity of the Center on PBIS

Thank you!

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