



School Wellness Integration Targeting Child Health



Evaluating School Wellness Programming through an Implementation Science Lens: Research, Practice, and Policy Implications

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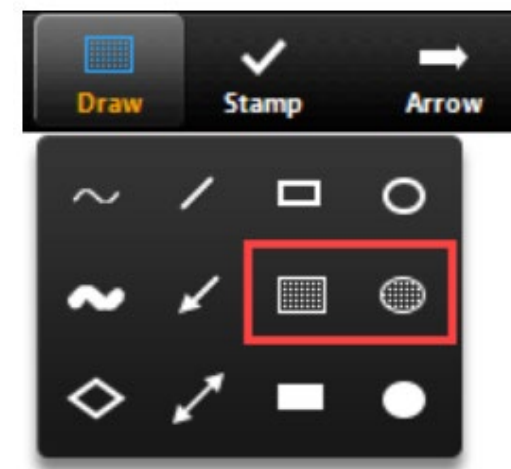
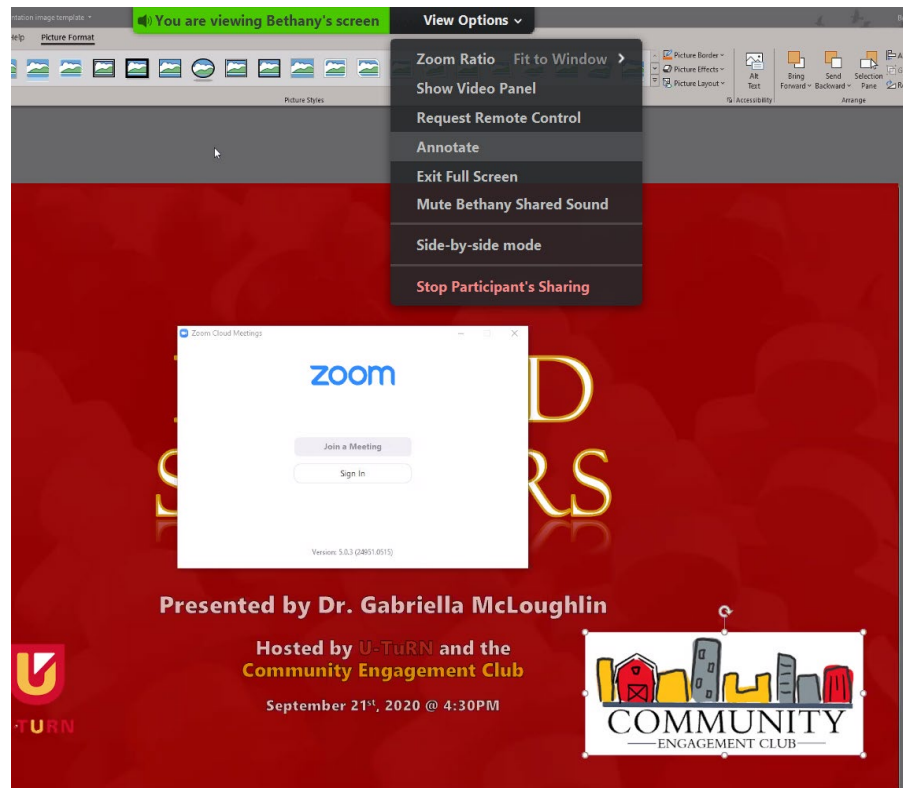
Helping Students to switch what they Do, View, and Chew!

Outline

- Brief Overview of Dissemination and Implementation (D&I) science
- Application of D&I to school-based wellness programming
 - School Wellness Integration Targeting Child Health (SWITCH)
- Practice and policy implications for D&I related work

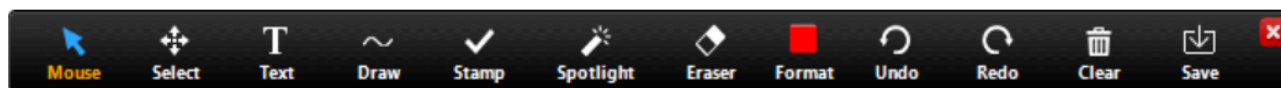


Annotating on Zoom



Annotation tools

You will see these annotation tools:



Note: The Select, Spotlight, and Save options are only available if you started the [shared screen](#) or [whiteboard](#).



Question for the Group

- What is your familiarity with dissemination and implementation (D&I) science? Please select/annotate to pick your answer

Not much (no involvement in projects yet)

A little (planning stages of a D&I project)

A lot (have conducted several D&I projects)

I still don't know what D&I science is/I came for the free food





Dissemination and Implementation Science (D&I)

- The processes by which evidence-based interventions are implemented and disseminated into practice
- Adoption of rigorous dissemination and implementation science (D&I) techniques can enhance program adoption and adherence



Implementation Outcomes



Adm Policy Ment Health (2011) 38:65–76
DOI 10.1007/s10488-010-0319-7

ORIGINAL PAPER

Outcomes for Implementation Research: Conceptual Distinctions, Measurement Challenges, and Research Agenda

Enola Proctor · Hiie Silmere · Ramesh Raghavan ·
Peter Hovmand · Greg Aarons · Alicia Bunger ·
Richard Griffey · Melissa Hensley

Acceptability

- Degree to which intervention/practice is agreeable/satisfactory

Adoption

- Intention to act/initial actions of implementing stakeholders

Appropriateness

- Perceived fit/relevance

Feasibility

- How easy/hard it will be for agency staff to adopt/implement

Fidelity/Compliance

- Degree to which EBP is implemented as planned

Penetration

- Number/percent of sites implementing EBP

Sustainability

- Extent EBP/policy is maintained within a setting

Cost

- Cost impact of implementation effort



Implementation Determinants



Consolidated Framework for Implementation Research

Intervention

Source, Evidence strength & quality, Design
Quality & packaging, Relative advantage,
Adaptability, Triability
Complexity, Cost

Outer Setting

Patient characteristics, needs and resources,
Cosmopolitanism, Peer pressure, External
policies and incentives

Process

Planning, Engaging opinion leaders, champions,
change agents, Executing, Reflecting and
evaluating

Inner Setting

Structural characteristics, Networks and
communications, Culture, Climate, Readiness
for implementation

Individuals involved
Knowledge & beliefs about
intervention
Self Efficacy
Individual stage of change
Individual identification with
organization
Other personal attributes

Implementation Science



Research article

Open Access

Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science

Laura J Damschroder^{*1}, David C Aron², Rosalind E Keith¹, Susan R Kirsh²,
Jeffery A Alexander³ and Julie C Lowery¹

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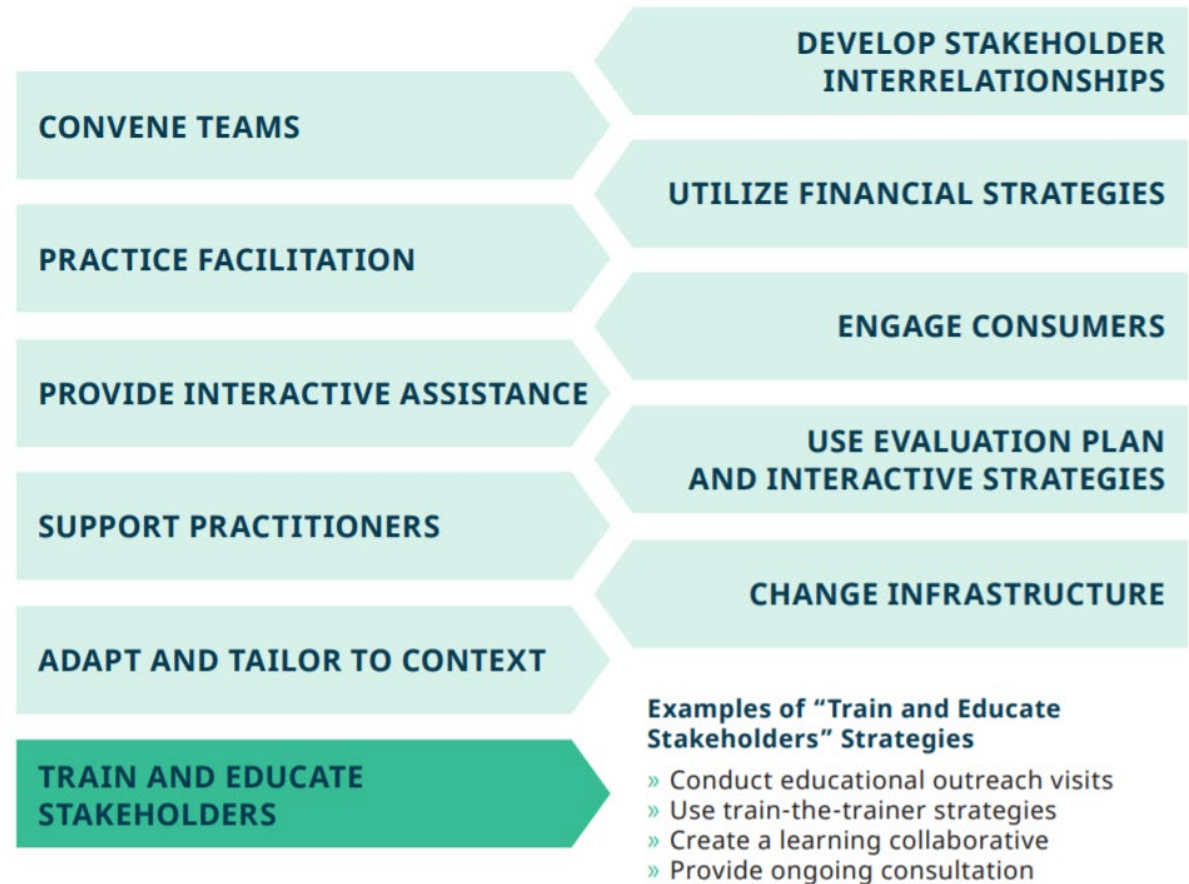
Email: Laura J Damschroder^{*} - laura.damschroder@va.gov; David C Aron - david.aron@va.gov; Rosalind E Keith - rekeith@umich.edu; Susan R Kirsh - susan.kirsh@va.gov; Jeffery A Alexander - jalexand@umich.edu; Julie C Lowery - julie.lowery@va.gov

^{*} Corresponding author



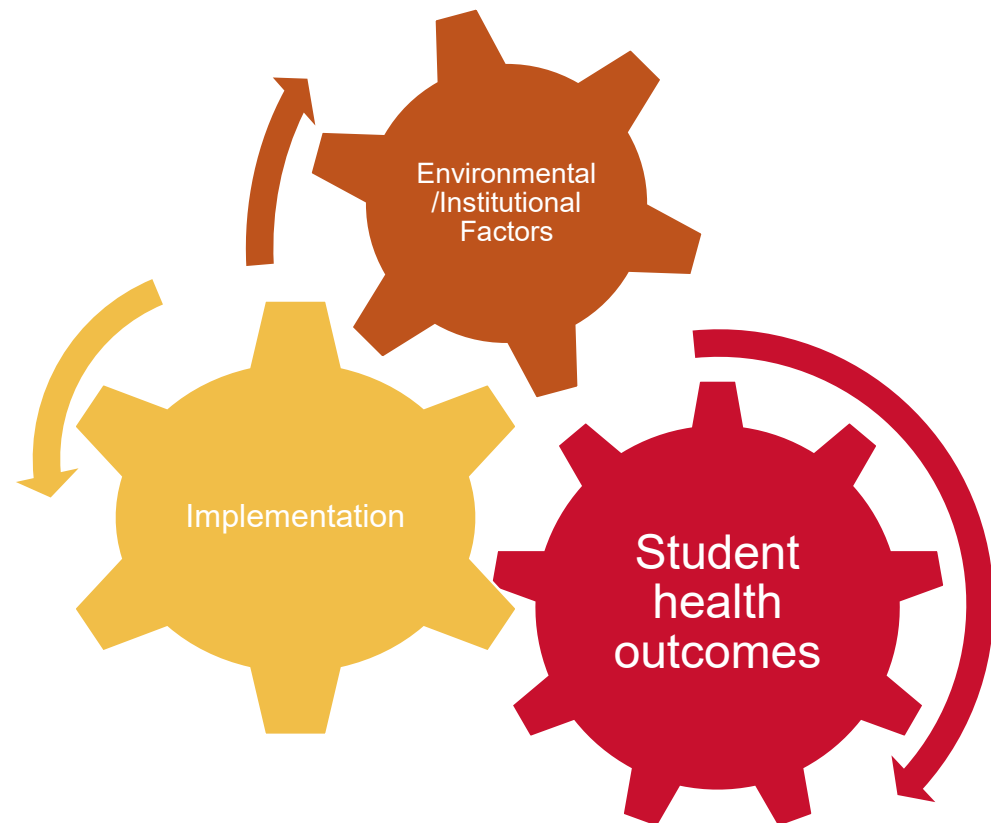
Implementation Strategies

- The “how-to” components of interventions
- Essential components to implementation- often poorly described



SWITCH Program

- **Build capacity** in schools to **develop and sustain** comprehensive wellness programming to enhance youth health behaviors



Original Switch Program

Evidence-based obesity prevention study focused on helping kids to “**Switch what they Do, View and Chew**”



Switch UP to 60 minutes or more of physical activity a day.



Switch DOWN to 2 hours or less of screen time (TV, internet, video games etc..) a day.



Switch UP to 5 or more servings of fruits and vegetables a day.

BMC Medicine



Research article

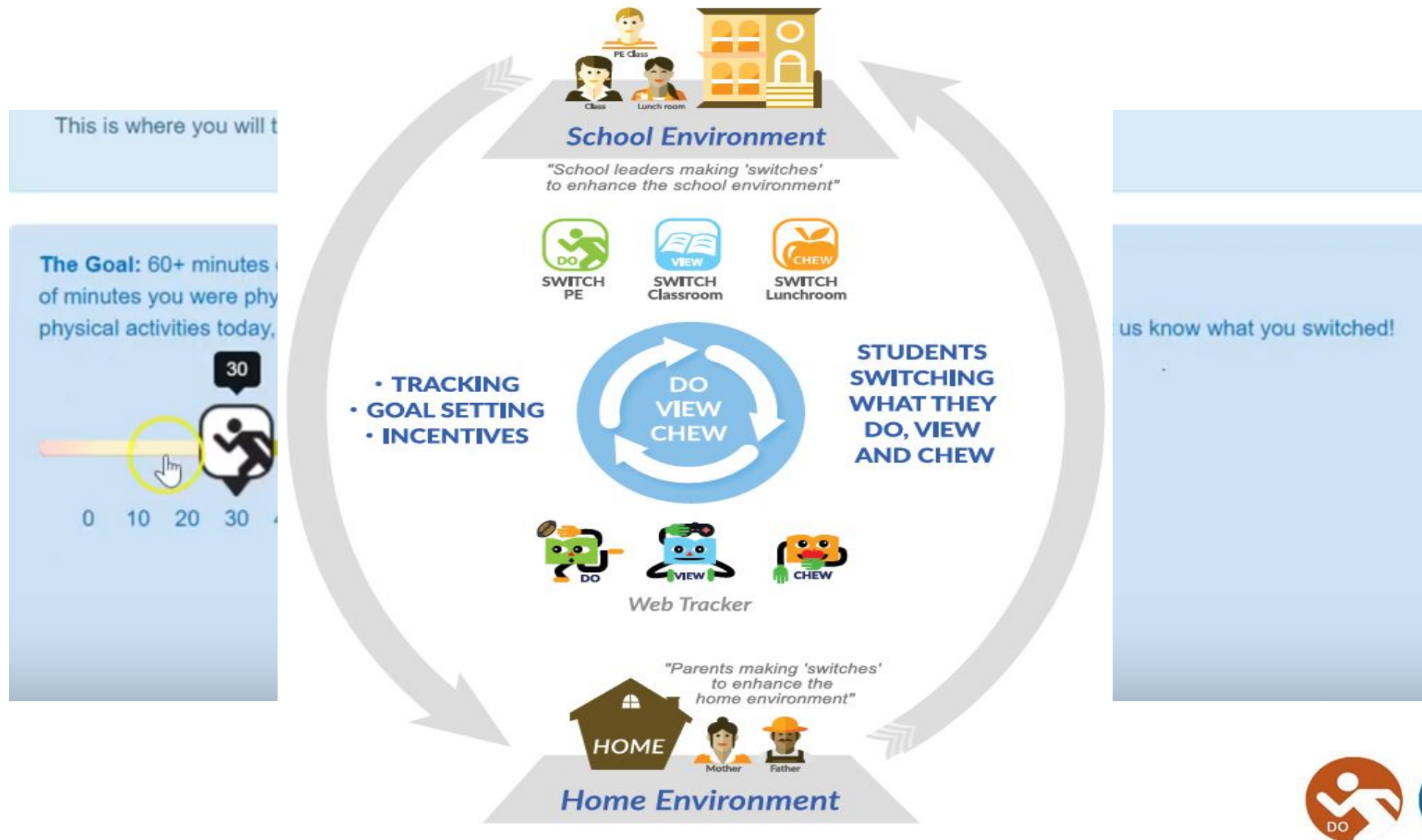
Open Access

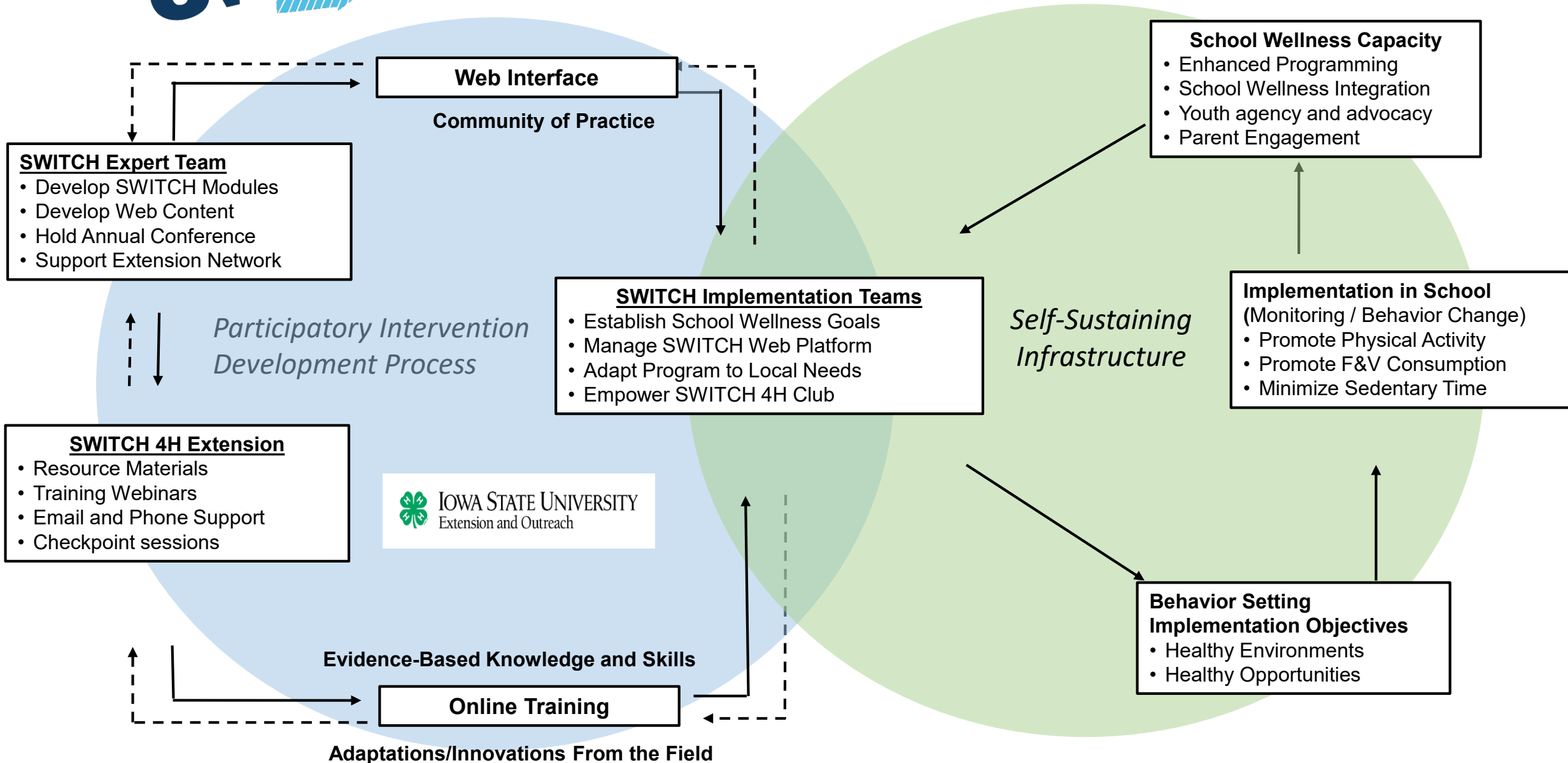
Evaluation of a multiple ecological level child obesity prevention program: Switch® what you Do, View, and Chew

Douglas A Gentile*^{1,2}, Greg Welk³, Joey C Eisenmann⁴, Rachel A Reimer⁵, David A Walsh², Daniel W Russell⁶, Randi Callahan², Monica Walsh², Sarah Strickland² and Katie Fritz²



Key Components of SWITCH





SWITCH Website (www.iowaswitch.org)

- Multi-Level
 - Core Team
 - Extension
 - Teachers
 - Parents
 - Students
- Fully Integrated
 - Registrations
 - Tracking
 - Communication
 - Assessments

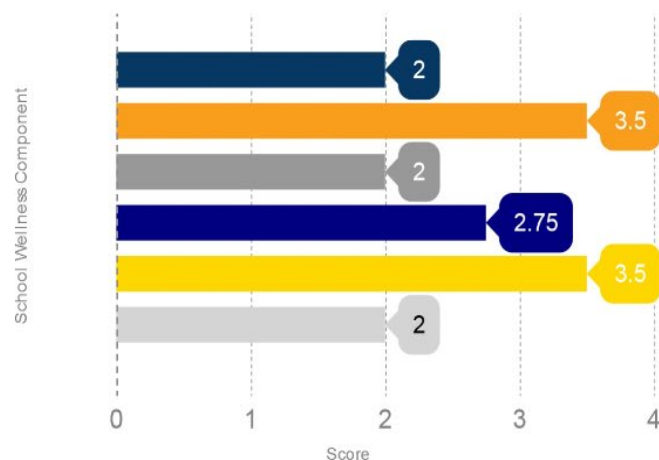
The screenshot shows the SWITCH website's Student Dashboard for 'CHEW' week. The top navigation bar includes links for HOME, ABOUT SWITCH, SWITCH, and CONTACT, along with a user profile for 'HELLO ADAM!' with options for MY ACCOUNT and LOG OUT. The dashboard has tabs for Student Dashboard, Switch, Badges, Summary, and View All Switches. The main content area is titled 'TODAY'S SWITCH "CHEW" week!' and shows 'WEEK 3: Sunday 11 Dec 2016'. It sets 'The Goal: 5+ fruits and vegetables per day. Choose the number of fruits and vegetables you consumed today!'. A progress bar from 0 to 11 shows a red star at 5. To the right, a list of activities includes Fruit Juice (selected), Carrots, Apples and Peanut Butter, and Gummy Vitamins. A 'Week 3 Icon' of a character eating a red apple is shown. Below this is a 'WEEKLY SWITCH' section for 'WEEK 3: You can complete the missed switch tracker here !!'. It displays a grid for Monday through Sunday (Dec 05 to Dec 11) with 'CHEW' icons and 'X' marks, each with an 'Edit' button. A final note on the right states: 'You will get this icon for badges when complete the 50% of the switches this week.' with the 'CHEW' icon and a 'Check your badges !!' button.

School Wellness Environment Profile

- School level *'needs assessment'* of school wellness programming
- Customized feedback to support planning and system change

School Wellness Environment Profile

School Wellness Environment Audit Results



School's Wellness Environment Status



Interpreting Your Results

The bars are color coded into the 6 school wellness components evaluated in the environmental audit.

Higher scores are indicated by longer bars.

High scores (4-5) reflect areas of the school wellness environment where optimal programs & practices are in place.

Low scores (0-3) reflect areas of the school wellness environment where new initiatives could enhance the overall school wellness environment.

Youth Activity Profile

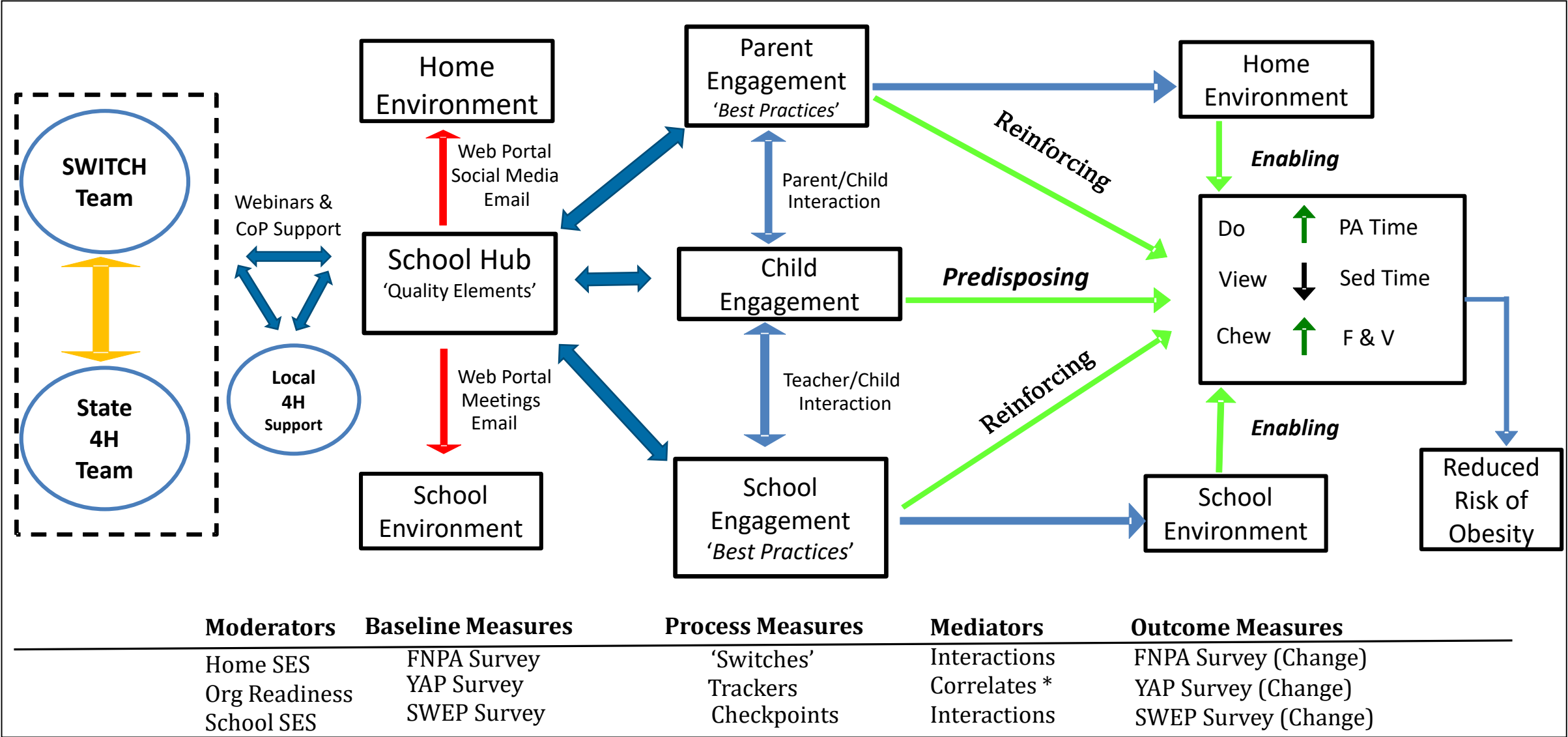
- Student level assessment for of lifestyle behaviors
 - Do (PA at school / home)
 - View (sedentary time)
 - Chew (nutrition choices)
- Feedback and Goal Setting
 - Student Report
 - School Report



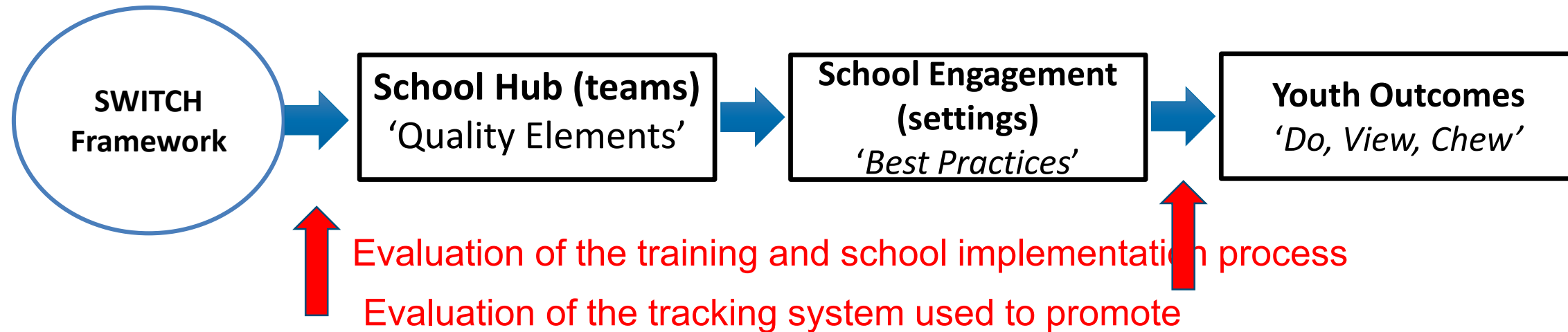
SWITCH Logic Model



Helping Children to
switch what they
Do, View and Chew



Studying Implementation



International Journal of
Environmental Research
and Public Health

IMPACT
FACTOR
2.468



The Importance of Self-Monitoring for
Behavior Change in Youth: Findings from the SWITCH® School Wellness
Feasibility Study

Volume 16 • Issue 20 | October (II) 2019



mdpi.com/journal/ijerph
ISSN 1661-7927



International Journal of
Environmental Research
and Public Health



Article

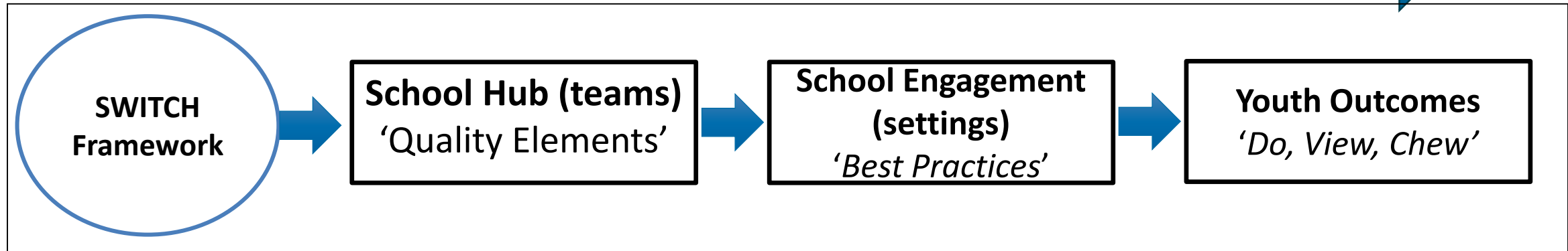
The Importance of Self-Monitoring for Behavior Change in Youth: Findings from the SWITCH® School Wellness Feasibility Study

Gabriella M. McLoughlin ^{1,*} , Richard R. Rosenkranz ² , Joey A. Lee ³, Maren M. Wolff ⁴ ,
Senlin Chen ⁵ , David A. Dziewaltowski ⁶ , Spyridoula Vazou ¹, Lorraine Lanningham-Foster ⁴,
Douglas A. Gentile ⁷ , Marisa S. Rosen ⁶ and Gregory J. Welk ¹

SWITCH



Promoting System Changes



Advantages

- Schools build capacity to plan and run school wellness programming
- Schools adapt programming based on local needs and priorities
- Schools are positioned to meet USDA requirements for school wellness ('Final Rule')



Where did that leave us?

Implementation Outcomes (Proctor, 2011)

- Acceptability
- Adoption
- Feasibility
- Fidelity/compliance

Implementation Determinants (CFIR; Damschroder et al.)

- Planning (core team meetings)
- Engaging-Champions
- Executing



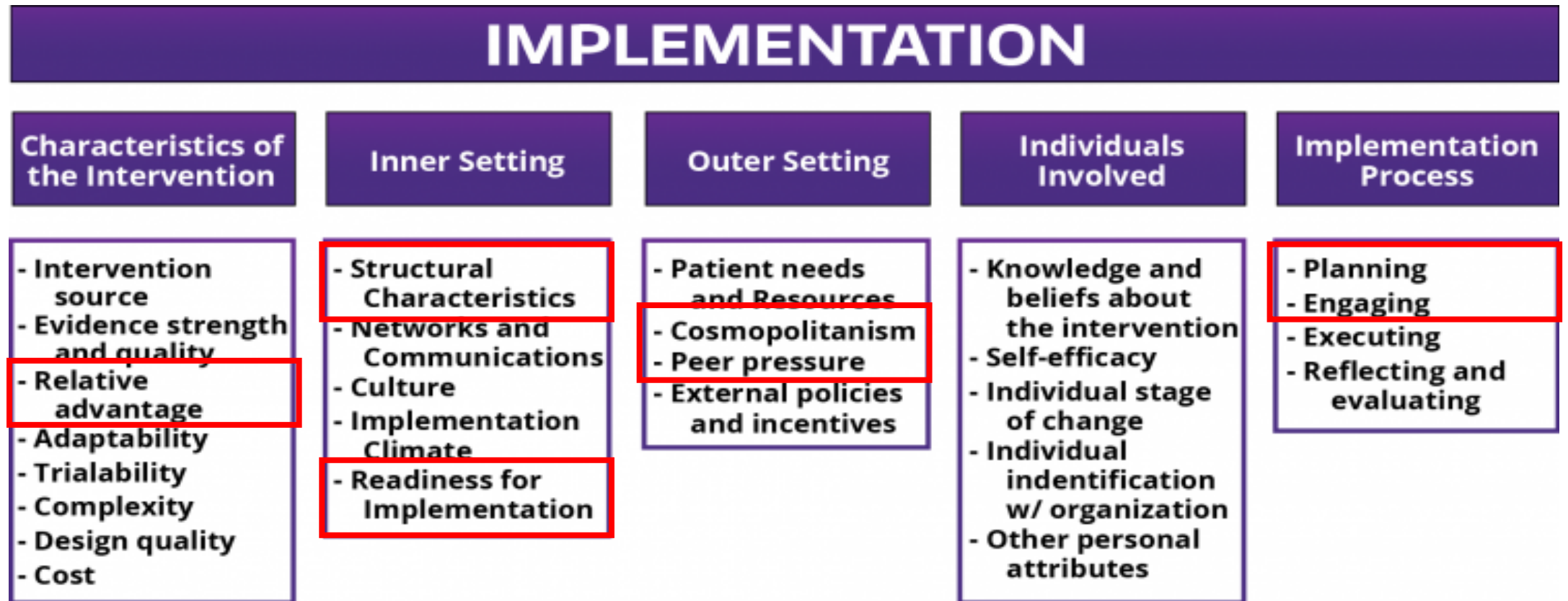


Goals of SWITCH Evaluation 2018-2019

Understand *how* schools adopted and implemented SWITCH through a mixed methods approach

Assess the degree to which factors from multiple ecological layers influence implementation outcomes

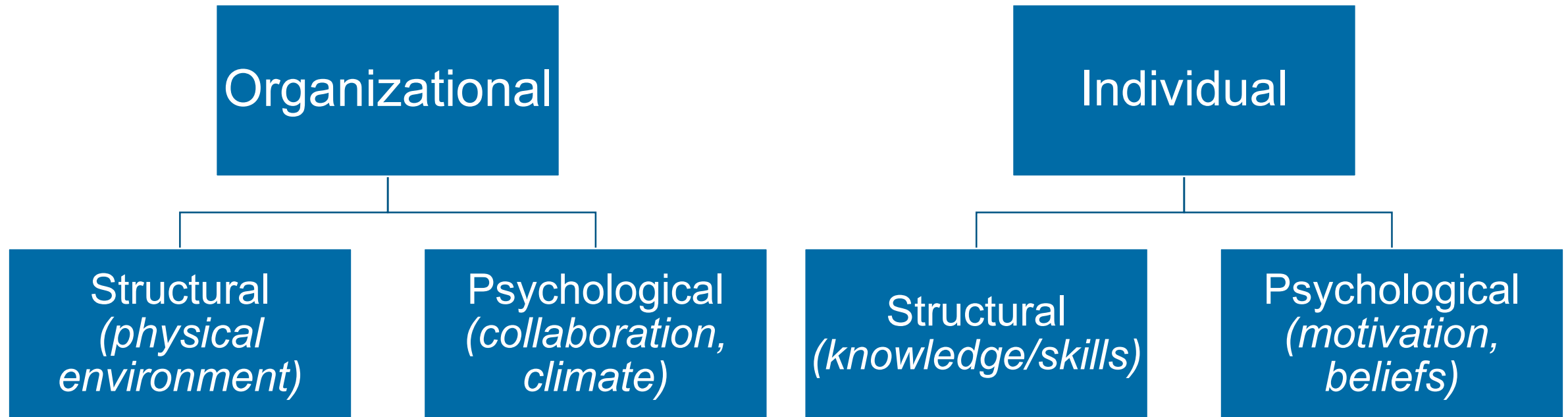
But what influences implementation?





Measure of Readiness/Capacity

- School Wellness Readiness Assessment (SWRA)
- Tool framed in Holt et al. (2010) Organizational Readiness for Change framework

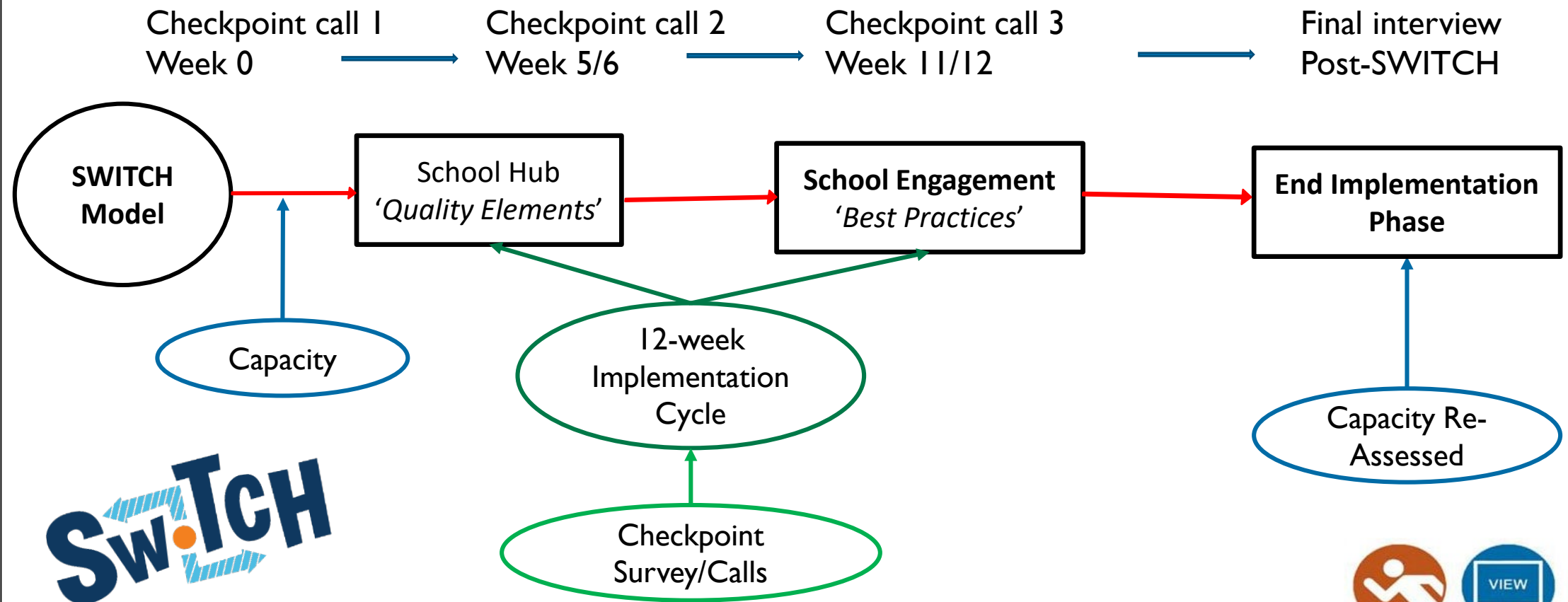


Implementation Measures

- Checkpoint surveys
 - Weeks 6 and 12
- Checkpoint Calls (recorded)
 - Weeks 1(1), 6(2), and 12 (3)
 - Goal setting
 - Planning and reflecting
- Final interview (>week 12)
 - Reflecting and feedback
 - Facilitators and barriers to implementation
 - Feedback on Extension involvement

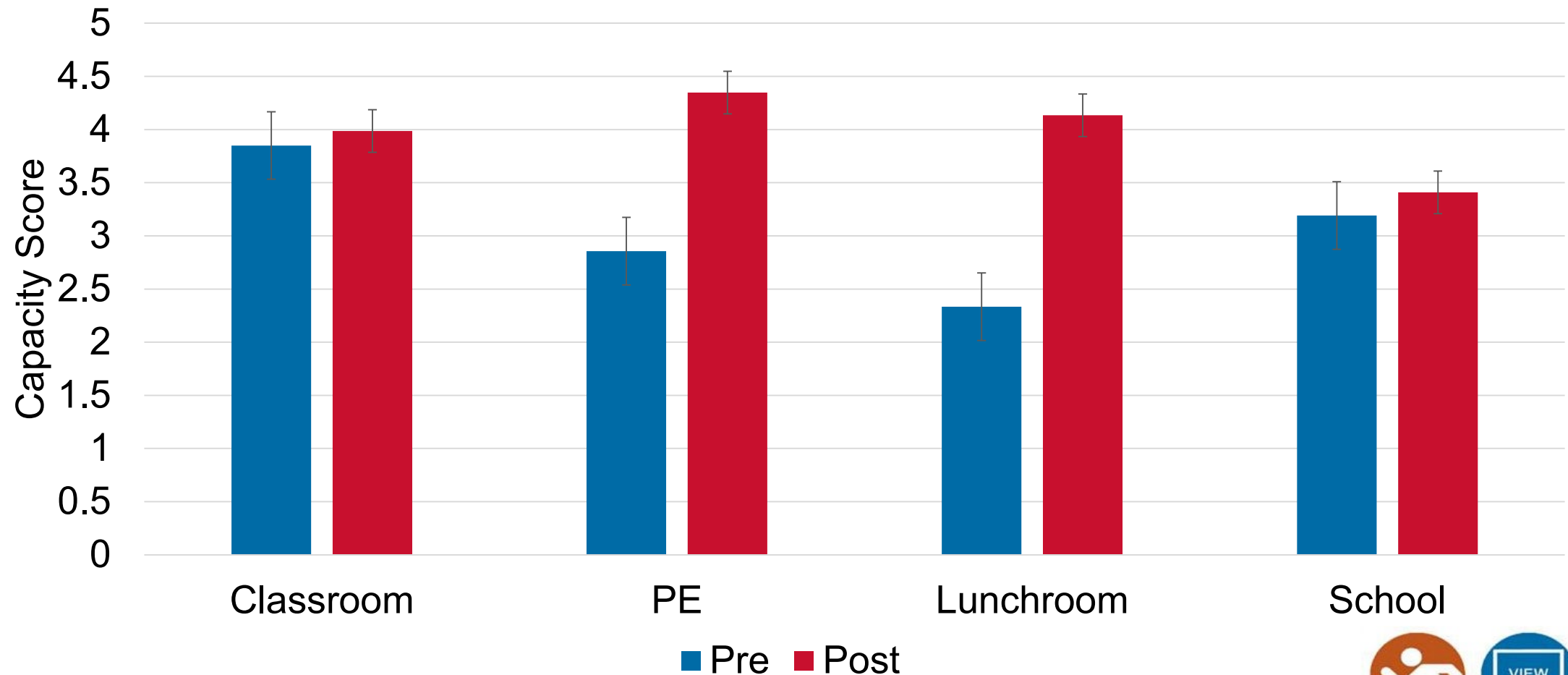


Implementation/Evaluation Timeline

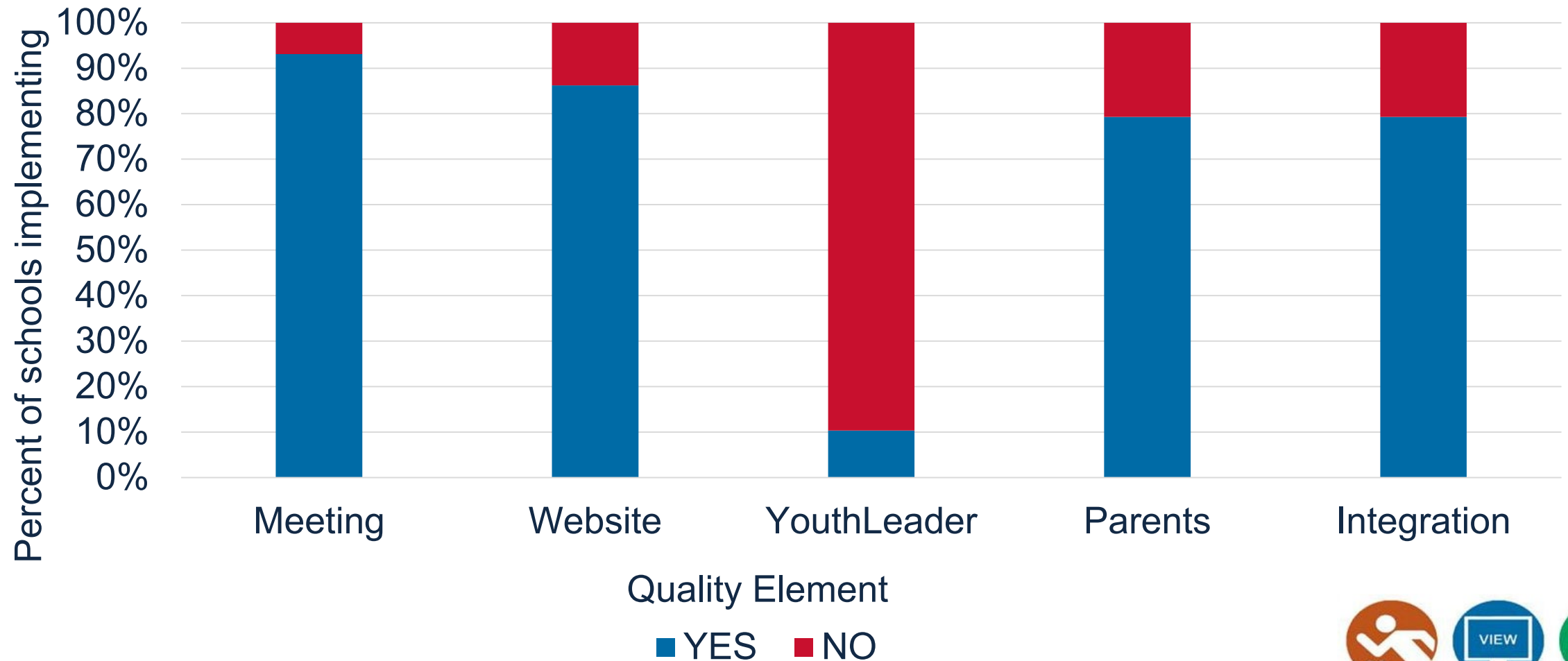




Inner Setting: Change in Readiness/Capacity

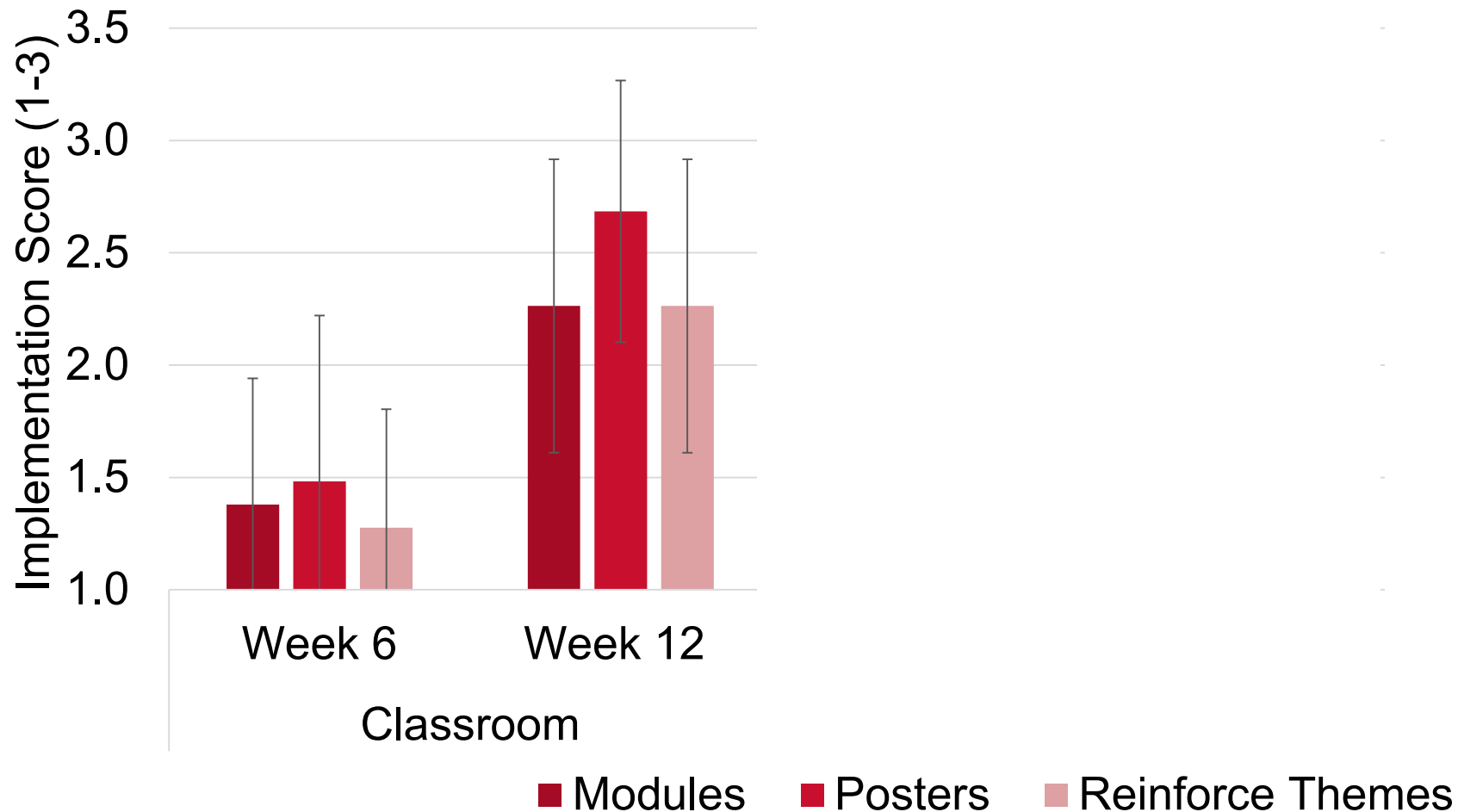


Implementation Process- Executing



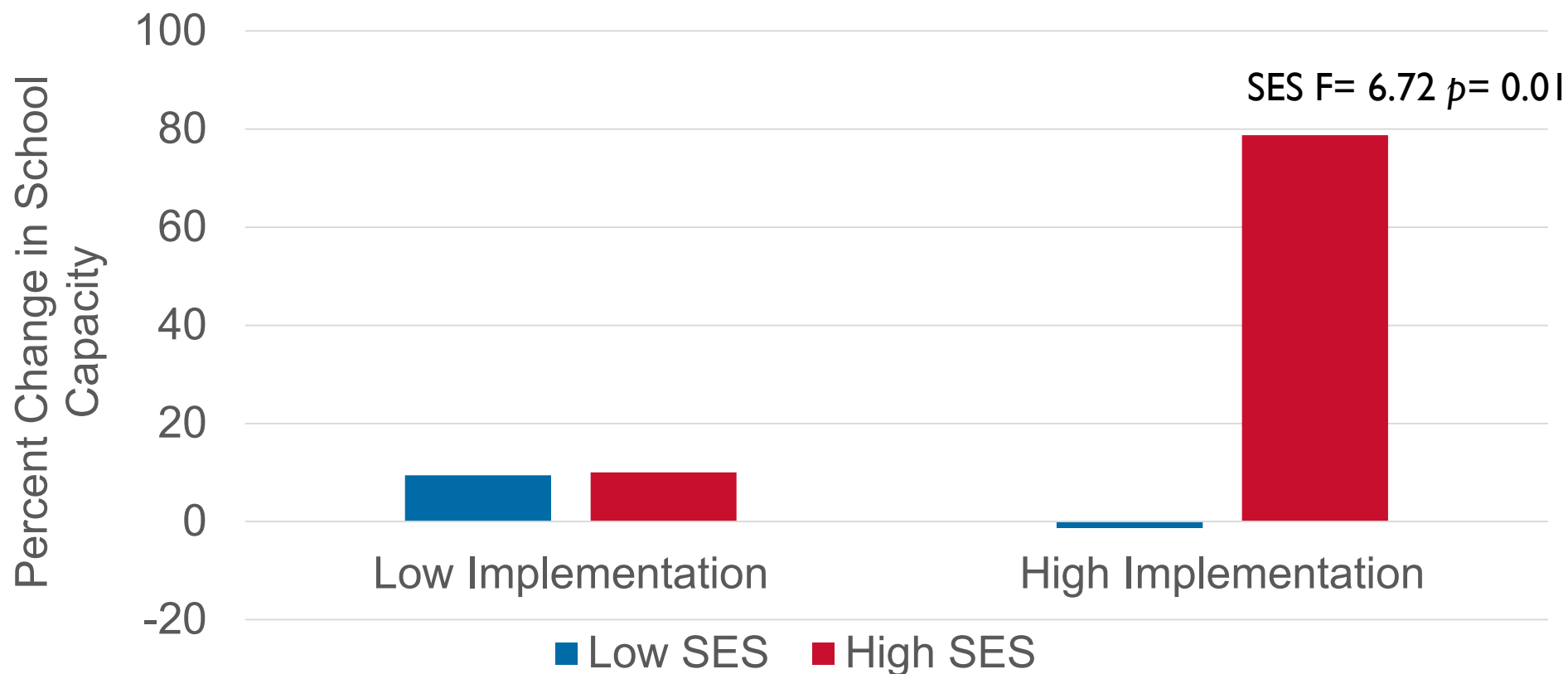
Implementation Process - Executing

1 = Not at all
2 = Partially
3 = Fully





Overall Implementation on Capacity Change



Implementation F= 1.38 $p=0.2$

Implementation*SES F=6.42 $p= 0.02$



Innovation Characteristics

Characteristics of the Intervention

- **Intervention source**
- **Evidence strength and quality**
- **Relative advantage**
- **Adaptability**
- **Trialability**
- **Complexity**
- **Design quality**
- **Cost**

Adaptation of modules for school needs

“We started talking about the food groups and energy. We talked about food chains and giving the food energy for the consumer. I tie it all in that way which really helped, and we're um, next week we're going to be hitting the respiratory system so I'll tie in some of the switch lessons.”

Perceived complexity of the intervention

“Our staff has already been trained on the benefits of movement during class. It's more a refresher of other ways to incorporate movement while learning. It doesn't necessarily just have to be a straight break. So, we're going to provide a few doses of training throughout the rest of the year.”



Outer Setting

Outer Setting

- Patient needs and Resources
- Cosmopolitanism
- Peer pressure
- External policies and incentives

Accountability of goal setting

"I think we were trying to go more with the flow and trying to rely on our expertise so I think the things we got from [Extension] were probably more helpful because she knew what our goals were. It was focusing on certain things that we were working on here."

Positive peer pressure from other schools

"I know if like the other schools [at the conference], this is their second year that the success rate is significantly higher, because the first year is super trial and error, where you're just like stumbling through it, and forgetting you're doing it. It made us say, 'Oh yeah, we're doing this? We've got to do something!'"

Collaborating with community/organizations

"We have the farmers market come to us. In the parking lot and each kid gets so much money and they actually go out and purchase things from the farmer."



Inner Setting

Inner Setting

- Structural Characteristics
- Networks and Communications
- Culture
- Implementation Climate
- Readiness for Implementation

Lack of staff buy-in

"We purposefully brought our food services gal to the conference, because we knew that that was a big challenge. She was kind of willing to go, but now since has not been too willing to change much."

Overwhelming staff

"I think this year ... It seems like every year I've been here, we've just been busier and busier. I think every year they seem to throw more and more stuff at the teachers that they have to get done in class."

Active promotion and priority of SWITCH

"Well for our wellness environment we've added, um, another block of recess time. Every day from, 2:30 to 2:40 we just added that and it's, not saying they're naughty but like their energy levels seems to be more focused just by, it's like taking that ten-minute break, the afternoon goes by so much better."



Characteristics of Individuals

Individuals Involved

- Knowledge and beliefs about the intervention
- Self-efficacy
- Individual stage of change
- Individual identification w/ organization
- Other personal attributes

Core team - school communication and perceived support

"Yesterday during PE, [food service] brought in the lunch trays. As I'm having PE! They just wheel them in and stick them and leave them in the gym. I'm like, "Class is in session." So yeah, some logistics..."

School wellness team (SWT) motivation

"My kids were with us, so, um, I sent [newsletter] out to all the teachers today and said "I would love to bring my speaker in to every classroom and show your kids this." And so, I've already got [an activity break]. I've got a schedule already started working on. So, I'm going to take that ... and I mean, it's a fun song, and if you play it loud, I think they'll love it, so. These little tiny things that take two seconds ... I mean, it takes three minutes total. It'll be fun to integrate not only our fourth and fifth graders, but actually our [whole] school."



Implementation Process

Implementation Process

- Planning
- Engaging
- Executing
- Reflecting and evaluating

Importance of training conference

“It helped having our students [at the conference]. I was able to understand it more because I went this year because I didn't go last year. It really helps the new people. It helps to listen to people's ideas that they shared what worked at their schools.”

Making parents aware of SWITCH

“It's very hard. You know, we have the language barrier and a lot of our parents work... we have a large number of parents that are not engaged in what's going on here at school.”

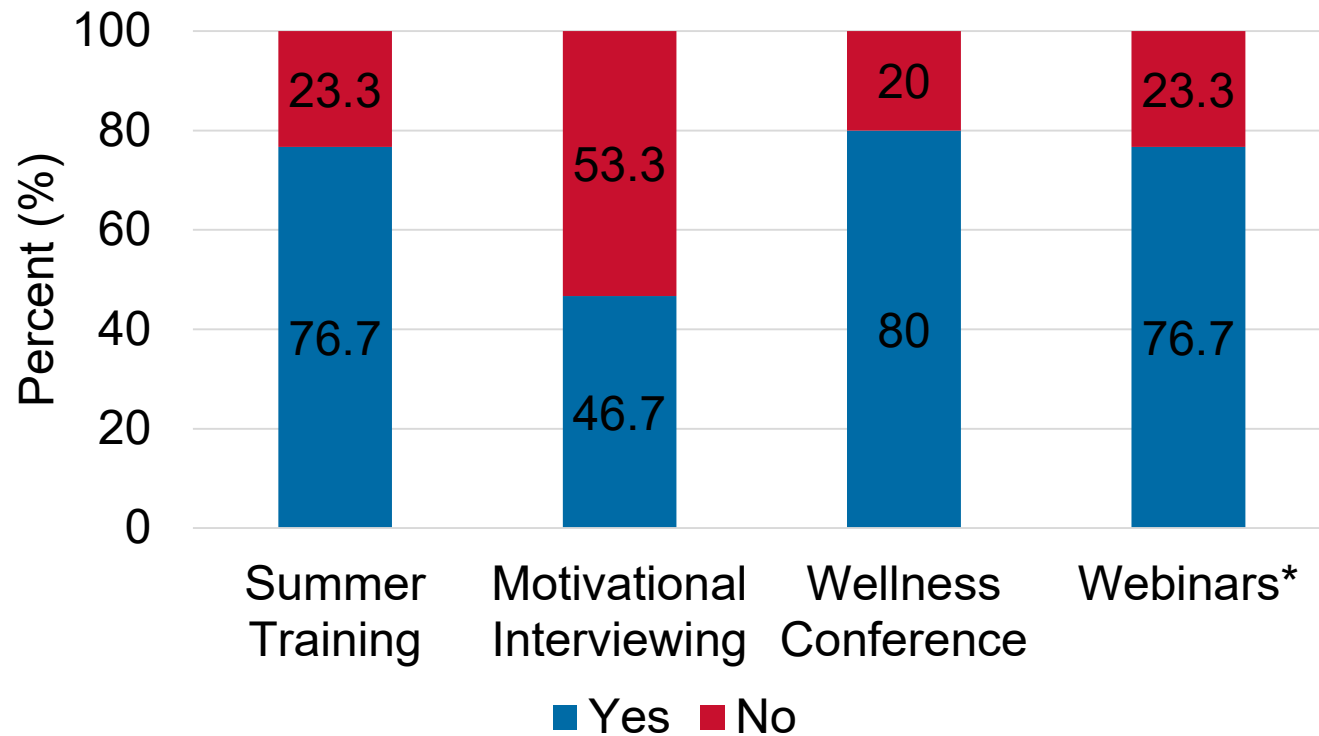
Lack of policy change, awareness

“Part of it that I struggle with and so does [colleague] is the school policy because administration and they say it was reviewed and approved at board and [colleague] didn't even know it was reviewed. And we're like well, we don't do this. Does it follow?





Extension Involvement and Perceptions



Building relationships with schools

Utility of training for role

Considerations for future involvement

SWITCH 2020 Evaluation

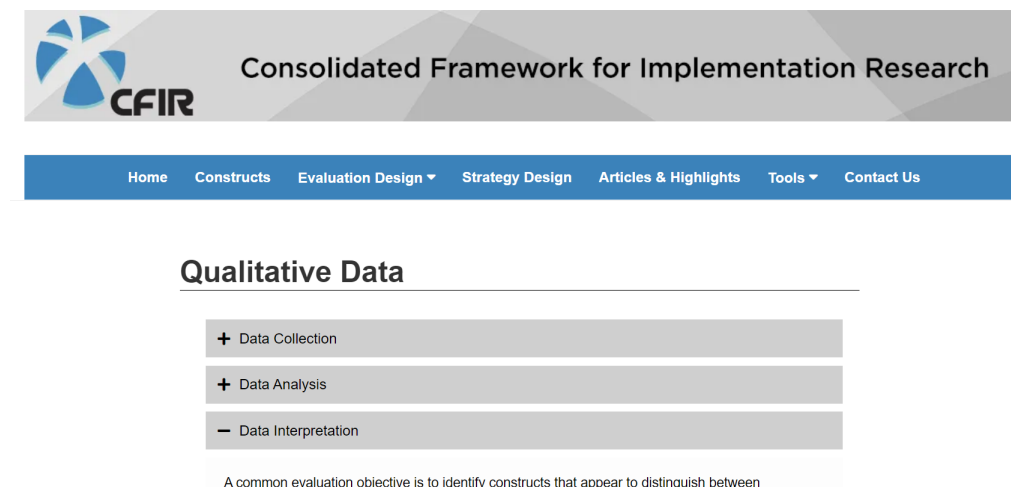
Systematically evaluate implementation determinants and outcomes through CFIR qualitative analysis protocol

Utilize findings to develop implementation strategies for improving implementation quality

Address ways in which social determinants of health (i.e., socio-economic status, % minority) impact implementation

Data Sources (47 Elementary and Middle Schools):

- Formal qualitative interviews with third party
 - CFIR determinants
 - Overall program satisfaction/**acceptability**
 - Perceived **sustainability**
- Checkpoint surveys
 - Implementation of quality elements/best practices
 - Perceived awareness and engagement from school stakeholders



Policy and Practice Implications

- For School Stakeholders:
 - Provide technical support to school wellness teams regarding policy development and implementation
 - Utilize continuous improvement plans for wellness as part of school improvement plan (Every Student Succeeds Act)
- For Researchers:
 - **Implementation quality > behavioral outcomes**
 - Examine suitability of evidence-based practices for specific contexts
 - Develop implementation strategies based on patient needs and resources
 - Baseline needs assessments/capacity for change are essential for preventing dropout



SWITCH Project Team

Research Team

Iowa State University

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Kyle Braun (M.S.)

Rebecca Harken (M.S.)

Tara Weber (M.S.)

Kathryn Long (M.S.)

Current Extension 4H Leaders

Laura Liechty – 4H Coordinator

Rachel Sweeney – Project Manager





School Wellness Integration Targeting Child
Health



Thanks for listening!

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Students Switch what they Do, View, and Chew!

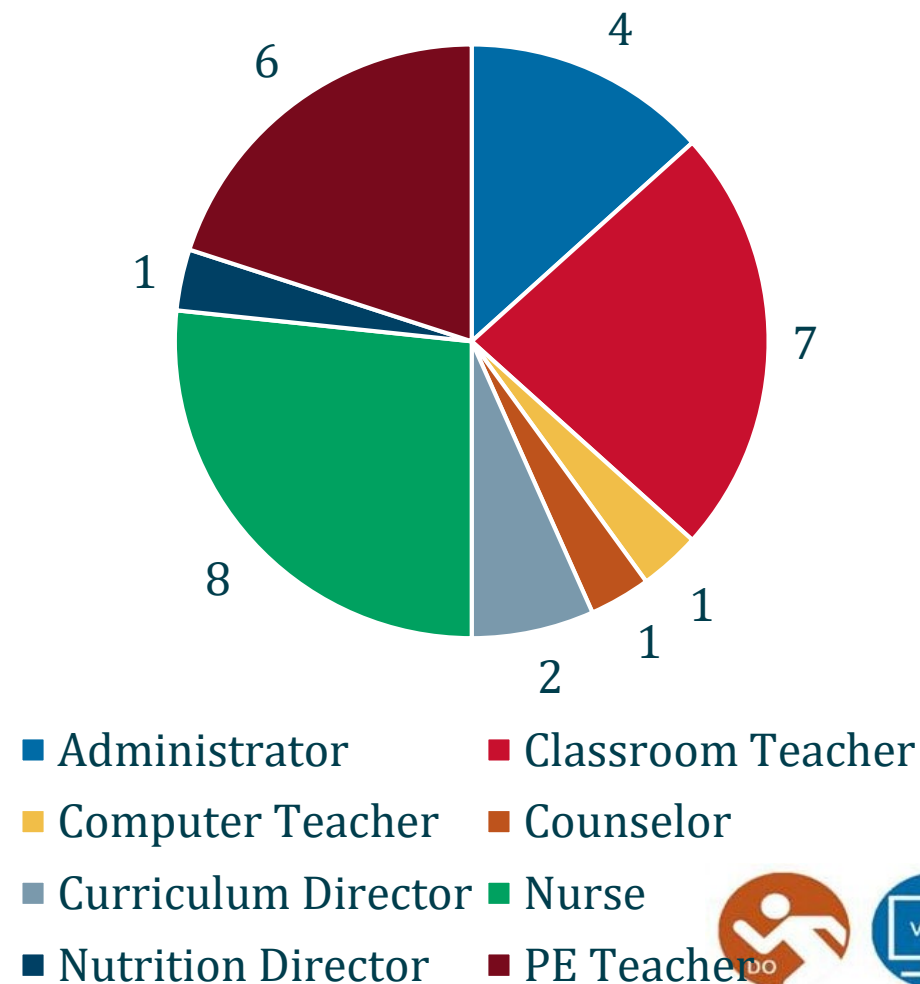
Main Interview Findings

V. Process	
Planning	SWT weekly meetings
	Striking a balance- avoiding burdening staff
	Importance of training conference
Engaging	
Opinion Leaders	Changing students' perceptions of health behavior
	Making parents aware of SWITCH
Formally Appointed Internal Implementation Leaders	Shared versus sole leadership
Champions	Within SWT coordination
	Student leadership in programming
External Change Agents	Collaborations with community
	County extension leaders running programs
Executing	Module implementation
	Posters and student incentives
	Adaptive implementation strategies
	New wellness programs and structural changes
	Environmental barriers/weather issues
	Staff wellness initiatives
Reflecting & Evaluating	High potential for sustainability
	Practice to policy- Wellness policy improvement
	Lack of policy change, awareness

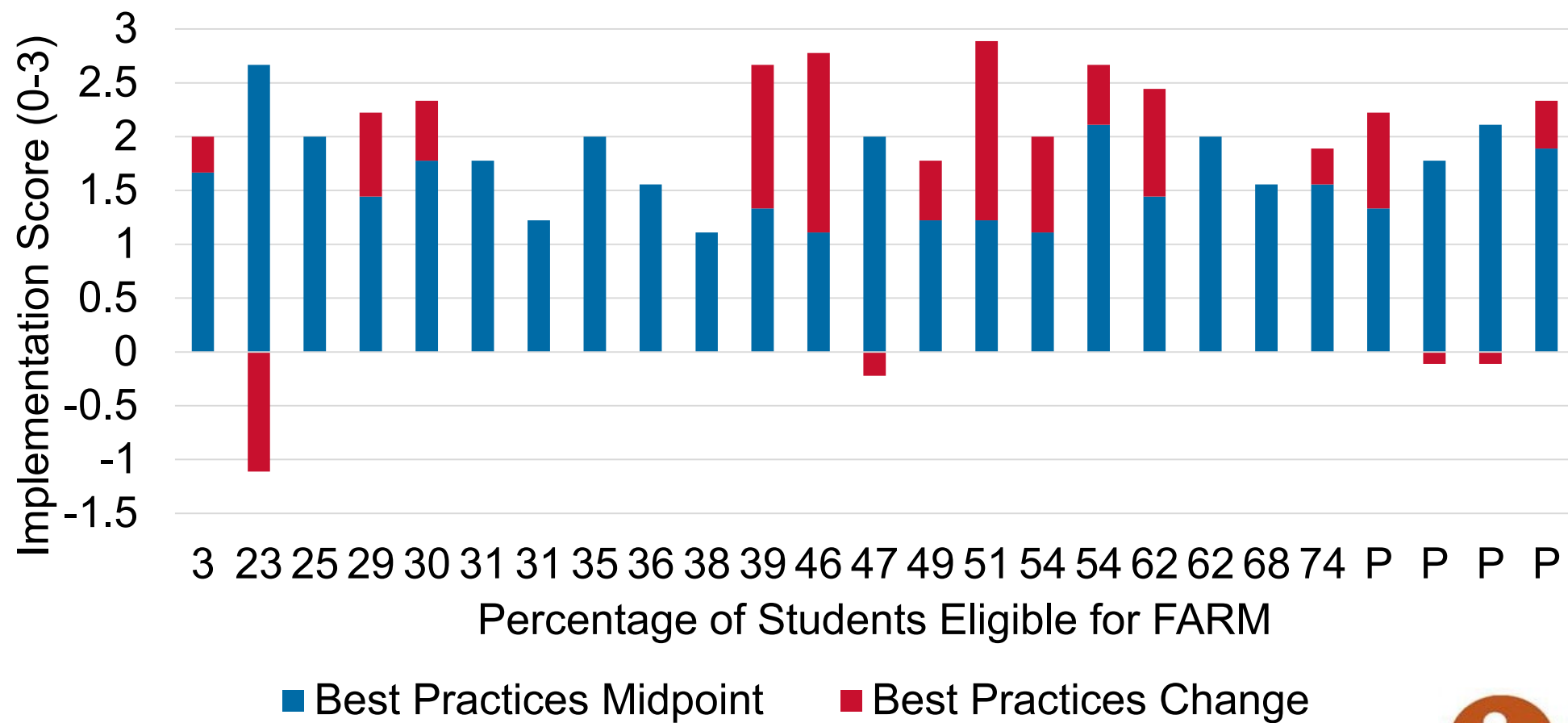
Core Team Composition

Role	N on Core Team
PE Teacher	24
Classroom Teacher	22
Nurse	16
Food Service	13
Principal/Admin	12
Counselor	4
Instructional coach	2

Core Team Leaders (N=30)



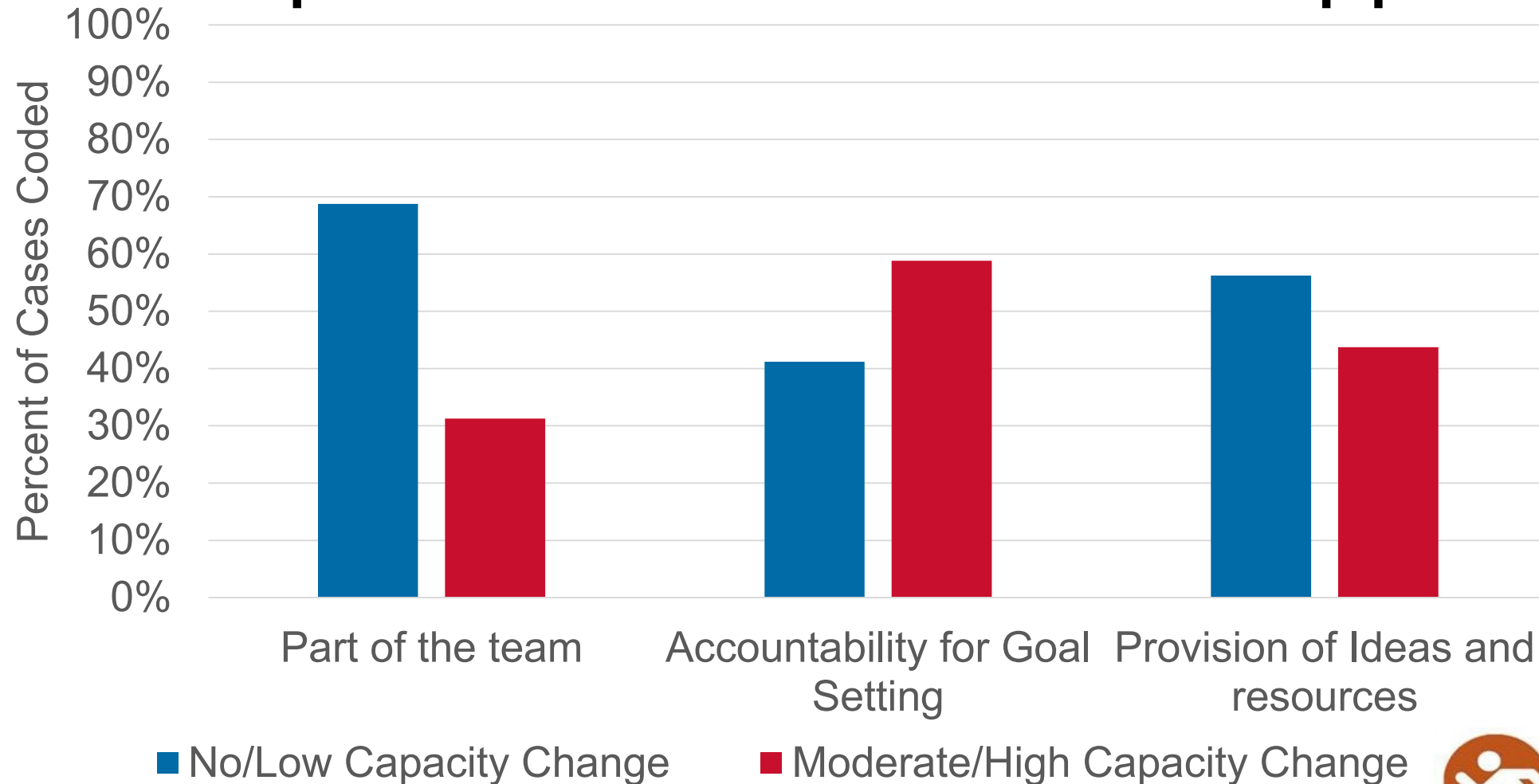
Implementation by FARM Rate



(P= private school)



Cosmopolitanism- Extension Support



SES and Extension support

