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Efficacy and Effectiveness Evaluation: A Behavior Research Example

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Today's agenda

- Review the IES goal structure and the role of efficacy and effectiveness research
- Describe the National Behavior Research Coordination Center (NBRCC) and its program of efficacy research
- Describe and provide interim efficacy results from one behavior intervention, First Step to Success
- Provide an overview of the national effectiveness study of First Step to Success

IES's research goal structure

- Goal 1: Identify interventions that may have an impact on student outcomes and factors that may mediate or moderate effects
- Goal 2: Develop interventions
- Goal 3: Conduct efficacy or replication trials
- Goal 4: Conduct effectiveness trials of interventions at scale
- Goal 5: Develop or validate data and measurement systems and tools

Efficacy and effectiveness research

- "Efficacy trials test if an intervention does more good than harm when delivered under optimal conditions."
- "Effectiveness trials test if an intervention does more good than harm when delivered under real-world conditions."

Source: Flay, B.R. (1986). Efficacy and effectiveness trials (and other phases of research) in the development of health promotion programs. *Preventive Medicine, 14*:451-474.

National Behavior Research Coordination Center (NBRCC)

Mary Wagner, Ph.D.
SRI International

NATIONAL BEHAVIOR RESEARCH COORDINATION CENTER

NBRCC purposes

- To coordinate, synthesize, and analyze data and findings from four Behavior Research Centers (BRCs)
  - BRCs are experimentally testing the efficacy of interventions for young children with serious behavior problems at school.
- To foster dissemination of knowledge on effective practices to consumers, practitioners, and policymakers

Behavior Research Centers and PIs

- Oregon Research Institute–University of Oregon
  - Hill Walker, Ph.D.
- University of South Florida–University of Colorado - Denver
  - Don Kincaid, Ph.D., Glen Dunlap, Ph.D., and Phil Strain, Ph.D.
- University of Washington
  - Douglas Cheney, Ph.D., and Scott Stage, Ph.D.
- Vanderbilt University–University of Minnesota–Virginia Commonwealth University
  - Joseph Wehby, Ph.D., Jennifer McComas, Ph.D., and Kevin Sutherland, Ph.D.

Coordination center strategy

- Common:
  - Research questions
  - Core sample
  - Randomized design
  - Measures

NBRCC research questions

Effects

- Do the examined interventions improve the behavior at school of students with severe behavior problems?
- Do the examined interventions improve the academic performance and participation of students with severe behavior problems?
- Are the effects of the examined interventions sustained for 1 year?

Continued…

NBRCC research questions

Effects

- How do these effects vary across the examined interventions?
- For whom do the examined interventions work best? Least well? (e.g., student grade level, gender, severity of behavior problems)
- In what contexts (e.g., classroom, school) do the examined interventions work best? Least well? (e.g., schools with behavior support systems, more highly qualified teachers)

Continued…

NBRCC research questions

Implementation

- How do fidelity (i.e., procedural adherence, quality, and intensity) and social validity from the teacher's perspective vary across the examined interventions?
- How do variations in contextual factors relate to variations in fidelity?

Core sample selection

- Students begin intervention in grades 1 through 3.
- Standardized screening instrument and procedure
  - Systematic Screening for Behavior Disorders (SSBD)
  - BRCs include students ranked highest with externalizing behavior problems in core sample.

Randomization strategies

- Tailored to specifics of the intervention
  - USF at the student level
  - ORI at the classroom level
  - UW and VU
    - Examine data on distribution of students with disabilities across schools (by age and category of disability)
    - Match schools willing to participate on critical variables
    - Then randomly assign pairs of schools to intervention and comparison groups

Data sources

- Behavior and Academic Outcomes
  - Office discipline referrals (ODRs)
  - Social Skills Rating System (SSRS) Teacher version–Student behavior and academic competence
  - Woodcock-Johnson III (WJ III) Tests of Achievement–Letter-Word Identification subtest
  - Oral Reading Fluency (ORF) passages
  - Academic Engaged Time (AET)–Observations of the amount of time student spends visibly and actively engaged in relevant academic material

Continued…

Data sources

- Implementation
  - Fidelity measured repeatedly throughout intervention by observational checklists to determine:
    - Adherence–Whether each procedure specified for an intervention is implemented
    - Quality–How competently each procedure is implemented
    - Dosage–Amount of treatment provided
  - Social validity from teachers' perspectives:
    - Acceptability–General support for intervention
    - Positive effects–for participating student(s) and classroom
  - Alliance–standardized scale measures perceptions of the strength of the relationship between implementer (e.g., coach) and client (e.g., teacher)

Continued…

Data sources

- Context
  - Classroom Atmosphere Rating Scale (CARS)
  - Student Enrollment Survey–basic demographics
  - School Record Survey (e.g., IEP/504 plan status, instructional settings)
  - Classroom / Teacher Survey (e.g., classroom and teacher characteristics, teacher supports, teacher self-reported skills to work with students with behavior problems)
  - School-wide Evaluation Tool (SET)–Interview and observation protocol assesses extent to which school implements critical features of school-wide positive behavior supports
  - School Characteristics Survey–Items include student characteristics, school climate, and staff and program resources
  - Common Core of Data (CCD) from National Center for Education Statistics

First Step to Success: Background

- Secondary-level intervention
- Three components
  - Universal screening
  - School intervention
  - Family-based intervention
- Over approximately 12 weeks, designed to teach young children behaviors and approaches to learning that lead to school success
- Instructs parents (in 6 home visits) how to teach their children skills for school success
- Efficacy study implemented in Albuquerque Public Schools, New Mexico

Continued…

First Step to Success: Background

- Developed from a model development grant funded by OSEP from 1992-1996
- Has been implemented in school districts in more than 25 states, 4 Canadian Provinces, Australia, and New Zealand
- Since 1992, FSS has been the subject of dozens of research studies and evaluations

First Step to Success: Evidence of efficacy

Ed Feil, Ph.D.
Oregon Research Institute

First Step to Success: Intervention principles

- Teachers are powerful positive reinforcers.
- Identify and reduce problem behavior.
  – Hitting, kicking, yelling, taking toys.
- Identify and increase positive behaviors.
  – Cooperating, talking with “inside voice,” playing appropriately with toys.

First Step to Success

- A program of screening and interventions designed for young children at risk for the development of antisocial behavior.
- Behavior Coach serves as a bridge, working with the child, parents, and teachers.
- Screening: SSBD.
- Interventions: CLASS and homeBase.

CLASS program

- Positive behavior management program
- Children learn how to:
  - Attend to the teacher
  - Get along with others
  - Participate in activities

CLASS principles

- Teacher provides clear expectations.
- Parents and teacher give attention for appropriate behavior.
- Parents and teacher give little attention for negative behavior.

Procedures

- Screening for children at risk for behavior disorders
- **Green/red** card provides feedback
- Frequent to intermittent feedback
- 80% **green** gets class goal

  e.g., 5 minutes extra recess, popcorn
- Coach starts and teacher continues.

Days 1-5:
Behavior coach leads program

- Coach gives feedback.
- Teacher gives verbal praise.
- Student earns class reward for 80% green.
- Student brings card home.
- Parent rewards student.
- Behavior coach contacts home.

Behavior coach's role

Time	Length	Feedback
Day 1	20 min.	Every 30 sec.
Day 3	20 min.	Every 2 min.
Day 5	30 min.	Every 5 min.

Days 6-15:
Teacher leads program

- Teacher gives feedback.
- Teacher gives verbal praise.
- Student earns class reward for 80% green.
- Student brings card home.
- Parent rewards student.
- Behavior Coach contacts home.

Teacher's role

Time	Length	Feedback
Day 6	30 min.	Every 5 min.
Day 8	1 hour	Every 10 min.
Day 10	All day	Every 10 min.
Day 30	All day	Every 10 min.

Day 15-30:
Teacher continues program

- Teacher gives feedback.
- Teacher gives verbal praise.
- Student earns class reward every 2nd or 3rd day.
- Student brings card home.
- Parent rewards student.
- Teacher contacts home.
- Start of homeBase.

homeBase

- Brief student-focused program for parent/caregiver
- Skills to improve school adjustment
- Opportunities to practice
- Supports strong home-school partnership

homeBase

Week 1: Sharing school ■ Student practices giving information ■ Parent listens and gives encouragement	**Week 4: Let's figure it out** ■ Problem-solving: Stay calm and brainstorm ■ Parent helps to guide, encourage, and suggest steps to goals
Week 2: Cooperation ■ Parent and student learn strategies ■ Sticker card or chart at home	**Week 5: If you are nice to them, they'll be nice to you** ■ Initiation skills ■ Empathy and self-control ■ Cooperation
Week 3: Remembering limits ■ Giving effective directions and encouragement ■ Time-out procedures	**Week 6: You're great and you can do it** ■ Confidence-building

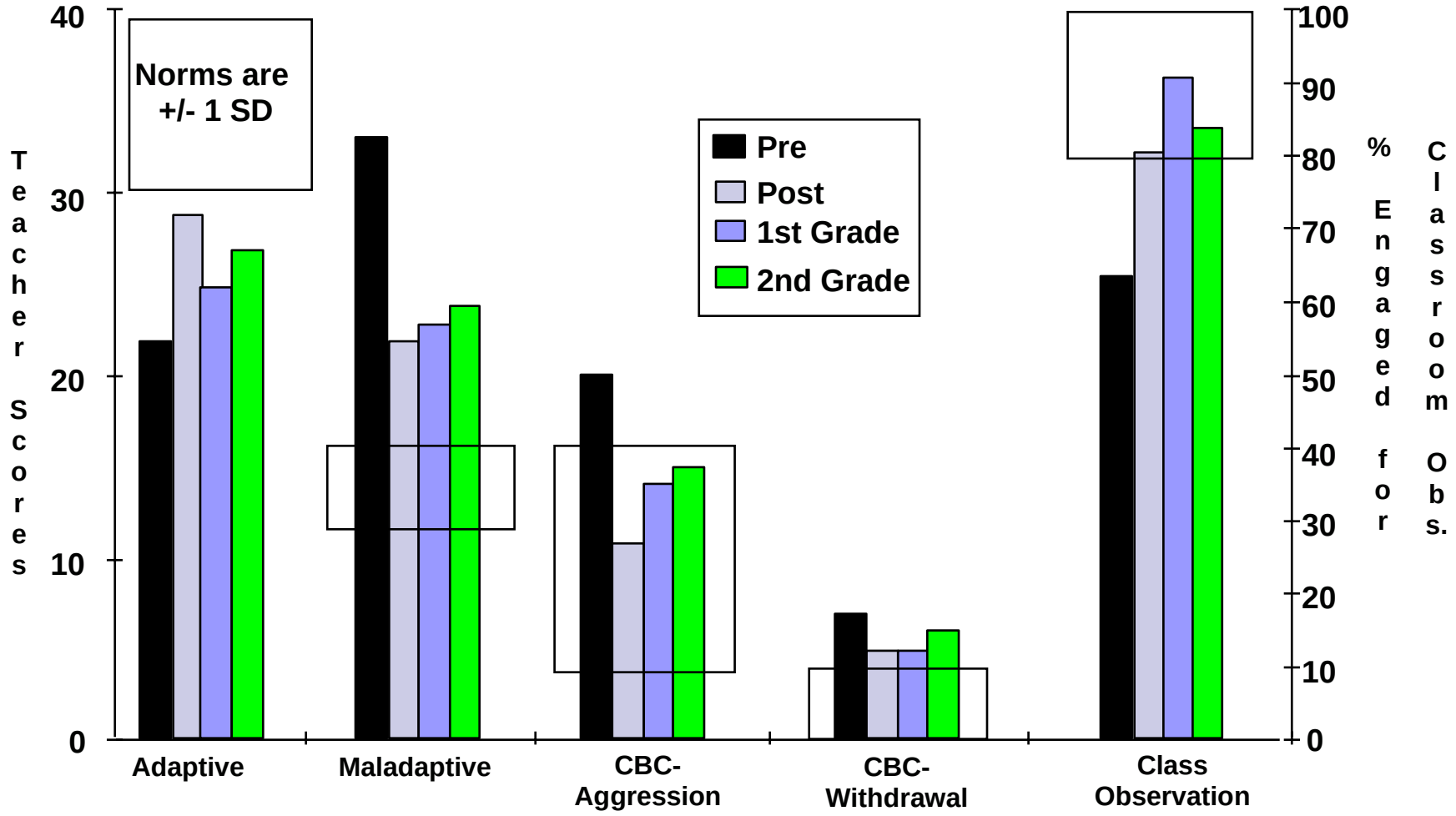
Testing efficacy

1. Randomized trial in local school district
   - N = 48 over 2 years with children/teachers randomized to First Step or wait-list/control (Walker et al., 1998)
   - Collect data at baseline, post intervention (treatment) or 2nd baseline (control) and post treatment (control)
2. Single subject
   - Identical twins across multiple baselines (Golly et al., 2000)
3. Oregon Statewide Initiative
   - Non experimental replication (Walker et al., 2005)
4. Randomized trial in large diverse school district
   - N = 250 over 2 years with children/teachers randomized to First Step or control (control teachers received training at end after trial is completed)
   - Collect data at baseline, post intervention, and next year follow-up

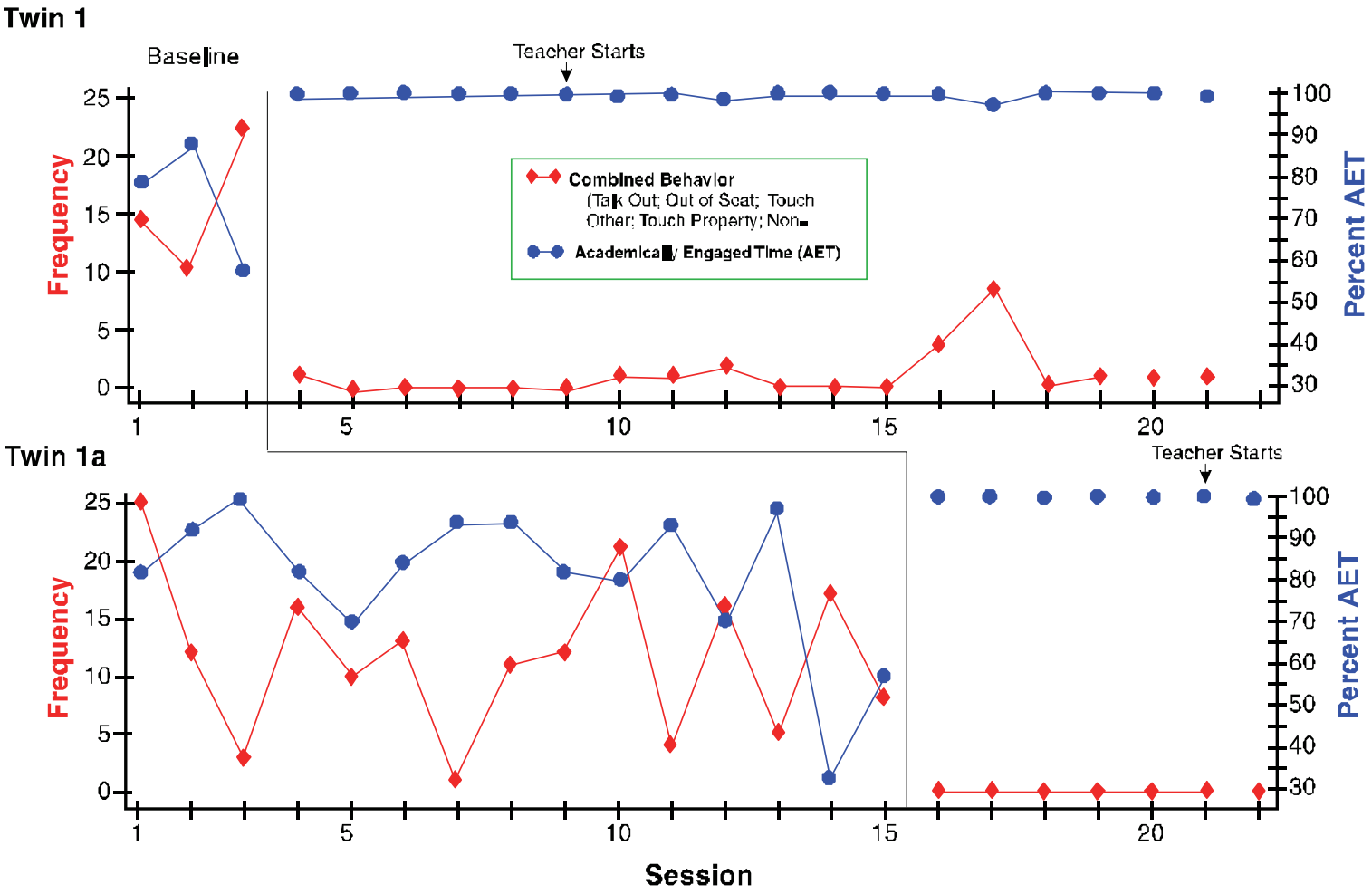
Study 1: ANCOVA with experimental and wait-list control groups across five dependent measures

Measures	Baseline M (SD)	Post-Intervention (Exp.) or 2nd Baseline (Ctrl.) M (SD)	Significance
Adaptive Teacher Rating Scale			
Experimental	22.68 (5.03)	28.8 (4.19)	F = 22.91 (1,45)***
Wait-List/Control	20.83 (4.42)	22.10 (4.93)	
Maladaptive Teacher Rating Scale			
Experimental	32.40 (6.74)	23.52 (8.70)	F = 18.54 (1,45)***
Wait-List/Control	32.17 (7.82)	31.63 (7.03)	
Teacher Ratings on the CBC Aggression Subscale			
Experimental	22.24 (10.92)	13.54 (9.33)	F = 16.85 (1,44)***
Wait-List/Control	22.00 (11.05)	22.82 (10.04)	
Teacher Ratings on the CBC Withdrawn Scale			
Experimental	5.00 (3.83)	3.08 (3.39)	F = 0.23 (1,44)
Wait-List/Control	6.22 (5.21)	4.45 (4.54)	
Classroom Observation(s) of Academic Engaged Time			
Experimental	64.00 (10.59)	83.36 (21.09)	F = 5.65 (1,45)*
Wait-List/Control	58.78 (18.74)	68.18 (20.35)	

Raw score profile of cohort 1 across measures pre and post intervention for First Step



First Step to Success twin study 2



Study 3: Oregon statewide First Step to Success replication initiative

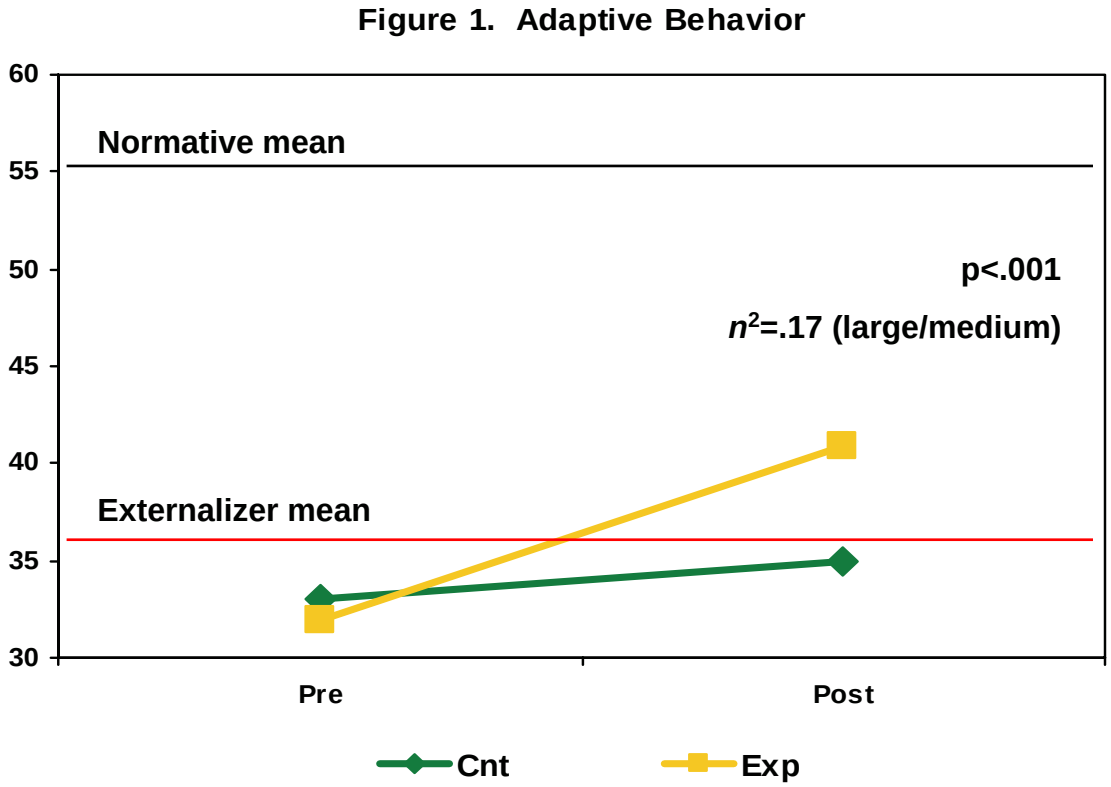
- Oregon state legislature funded a 2-year period to begin making the First Step program available to all schools.
- Outside evaluator

  Human Services Research Institute of Salem
- Evaluation results closely replicated those obtained in the initial trial.
- Found positive consumer satisfaction levels.
- These results were obtained despite high variation in fidelity and implementation quality.

Study 4: Behavior Research Center participant characteristics

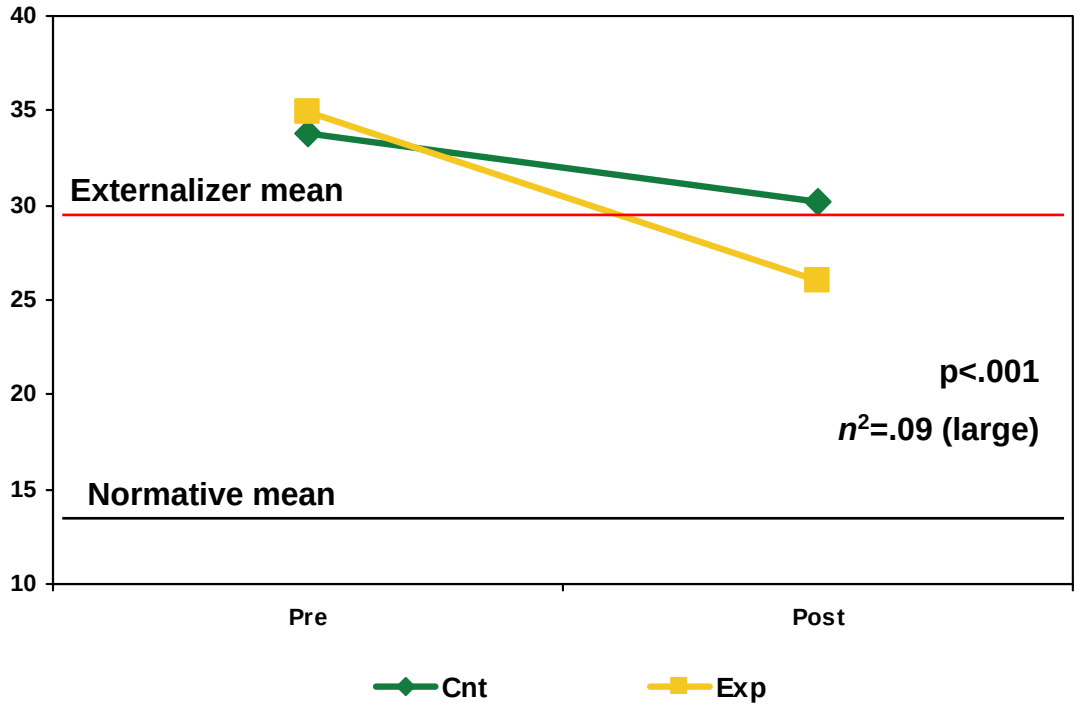
	Comparison (n =91)	Intervention (n = 96)	Test Statistic
Age M (SD)	7.04 (0.92)	7.22 (1.01)	-1.24
Female n (%)	24 (26.4%)	21 (21.9%)	0.52
Spanish-speaking n (%)	14 (15.4%)	7 (7.3%)	2.98
Hispanic n (%)	54 (60.0%)	50 (52.1%)	4.02
ELL n (%)	17 (18.9%)	13 (13.7%)	0.92
Free or reduced-price lunch n (%)	44 (63.8%)	55 (70.5%)	0.76

Study 4: Behavior Research Center preliminary results

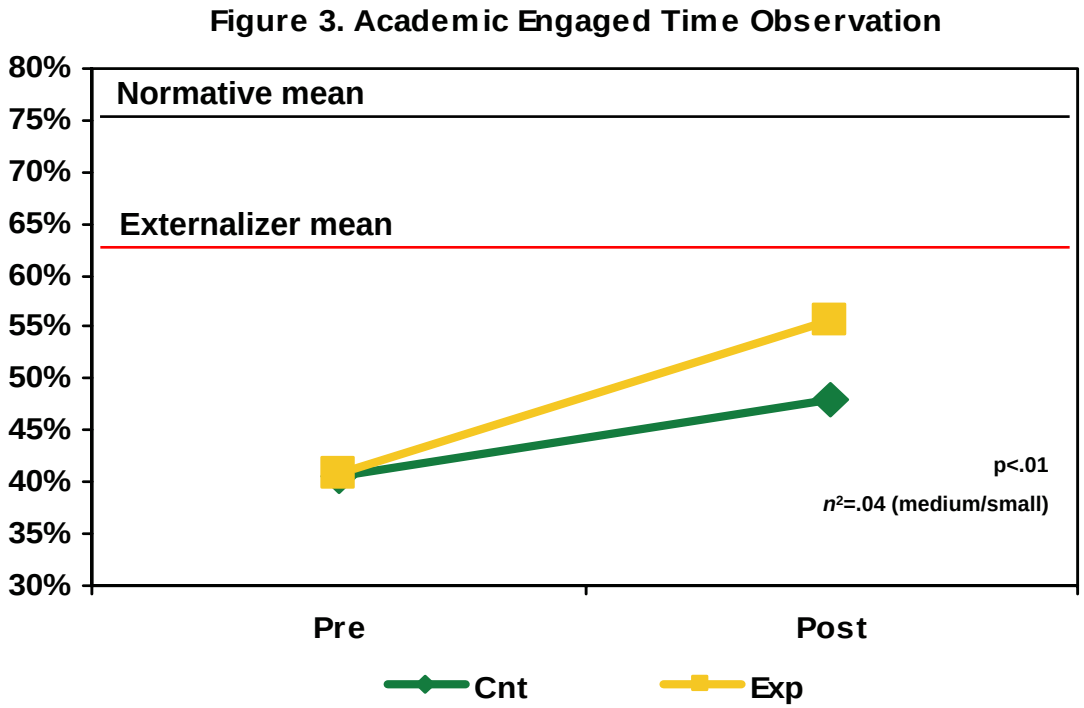


Study 4: Behavior Research Center preliminary results

Figure 2. Maladaptive Behavior



Study 4: Behavior Research Center preliminary results



Going to scale with First Step to Success: An IES goal 4 project

John Seeley, Ph.D.
Oregon Research Institute

"Where did the field get the idea that evidence of an intervention's efficacy from carefully controlled trials could be generalized as the 'best practice' for widely varied populations and settings?"

L.W. Green, 2001

Learning from public health research: The RE-AIM framework[1] *www.re-aim.org*

- Expands standards for randomized control trials of the CONSORT statement[2] by suggesting evidence must be presented on an intervention's
  - **Reach**–Number, proportion, and representativeness of participants
  - **Efficacy/effectiveness**–Impacts on important outcomes
  - **Adoption**–Number, proportion, and representativeness of agents who implement the intervention
  - **Implementation**–Fidelity to the model
  - **Maintenance**–Sustained, long-term effects

[1]Glasgow, Vogt, and Boles 1999; Dzewaltowski, Glasgow, Klesges, Estabrooks, and Brock 2004.
[2] Moher, Shulz, and Altman 2001.

Purposes of the RE-AIM framework

- To broaden the criteria used to evaluate programs to include external validity
- To evaluate issues relevant to program adoption, implementation, and sustainability
- To help close the gap between research studies and practice by:
  - Informing design of intervention
  - Providing guides for adoptees
  - Suggesting standard reporting criteria

RE-AIM dimensions, definitions, and levels

	DIMENSION	DEFINITION
Individual Level	**REACH**	1. Participation rate among eligible individuals 2. Representativeness of participants
	EFFICACY / EFFECTIVENESS	1. Effects on primary outcomes of interest 2. Impact on quality of life and negative outcomes

Continued…

RE-AIM dimensions, definitions, and levels

	DIMENSION	DEFINITION
Setting Level	**ADOPTION**	1. Participation rate among possible settings 2. Representativeness of settings participating
Setting Level	**IMPLEMENTATION**	1. Extent to which intervention delivered as intended 2. Time and costs of intervention
Both	**MAINTENANCE**	1. (Individual) Long-term effects of intervention (≥ 6 months) 2. (Individual) Impact of attrition on outcomes 3. (Setting) Extent of continuation or modification of intervention

Reach: Efficacy vs. effectiveness study

Efficacy study	Effectiveness study
Homogeneous, highly motivated sample Exclude those with complications, other comorbid problems	Broad, heterogeneous, representative sample Often uses a defined population

Adoption: Efficacy vs. effectiveness

Efficacy study	Effectiveness study
Usually one setting to reduce variability Settings with many resources and expert staff	Appeals to and works in multiple settings Adaptability to fit setting

Implementation: Efficacy vs. effectiveness

Efficacy study	Effectiveness study
By research staff closely following specific protocol	By variety of different staff with competing demands, using adapted protocol

Maintenance: Efficacy vs. effectiveness

Efficacy study	Effectiveness study
Often not an issue at the setting level Focus on individual level	Setting level maintenance equally important as individual level maintenance

First Step to Success effectiveness study: Initial research questions

Reach

- What are the characteristics of the students participating in First Step?
- How representative are they of the full sample of eligible students?
- How well is representativeness maintained over time?

Adoption

- What are the characteristics of participating districts and schools?
- How well do they represent the range of possible adopters of First Step?

Continued…

First Step to Success effectiveness study: Initial research questions

Implementation

- What is the level of implementation fidelity (adherence, quality, intensity) of First Step?
- How does it differ between teachers and schools?
- What are the incremental costs of implementing First Step?
- What is the level of social validity ascribed to First Step by participating teachers and parents?

Continued…

First Step to Success Effectiveness Study: Core research questions

Effectiveness

- To what extent does First Step improve the behavior at school and the academic performance and participation of students with severe behavior problems?
- For what kinds of students does First Step work best and less well?
- In what contexts (classroom and school level) does First Step work best and less well?
- How do variations in effectiveness relate to variations in implementation fidelity?

Continued…

First Step to Success effectiveness study: Core research questions

Maintenance

- Are the effects of First Step sustained for 1 year? For 2 years?
- Does maintenance of effects relate to variations in students or contexts?

National Effectiveness Study of First Step to Success

W. Carl Sumi, Ph.D.
SRI International

National Effectiveness Study of First Step to Success: Introduction

- **Goal 4** grant from the U.S. Department of Education, Institute of Education Sciences, National Center for Special Education Research
- Well-developed evidence base for the efficacy of First Step
  - "Manualized" off-the-shelf intervention
  - Solid evaluation framework
- Randomized control trial in 48 schools in 5 diverse elementary school districts across the country
- Evaluators (SRI) independent of program developers (ORI)

Study participants

- **8 to 10 schools** in each district
  - Matched on basic demographics and randomly assigned
  - Half in the **intervention** condition receive *First Step*
  - Half in the **usual-care** condition receive typical services
    - Teachers trained in *First Step* at conclusion of data collection
- **6 first- through third-grade students** in each school
  - All students screened with SSBD
  - 1 student per class participates in each condition each year
  - In year 2, intervention teachers implement *First Step* again with another student
  - Estimated total samples
    - 288 students in intervention
    - 144 students in usual care

Collaborating with schools

Participating schools:

- Allow teachers to participate in the study
  - Are reimbursed $200 for substitutes so participants can attend 1-day training
- Inform all parents of children in selected classrooms about class-wide screening
- Identify behavior coaches *(intervention schools only)*

Collaborating with teachers

All participating teachers:

- Conduct the class-wide screening
- Help evaluators obtain parental consent
- Complete a questionnaire and a behavior checklist for each participant
  - Receive $25 stipend for each completed questionnaire
- Allow classroom and student observations
- Allow administration of a brief reading assessment of each participant

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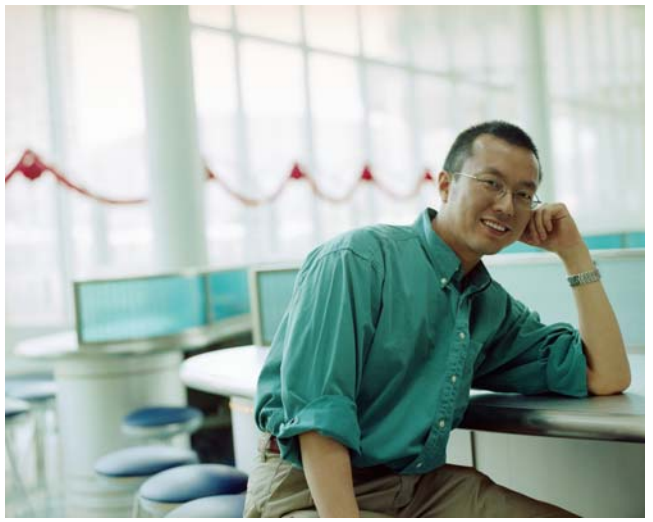
Collaborating with teachers

Intervention teachers:



- Attend a 1-day training
  - Receive $150 stipend
- Allow behavior coach to work with student and to provide consultation as needed
- Implement CLASS component starting on day 6

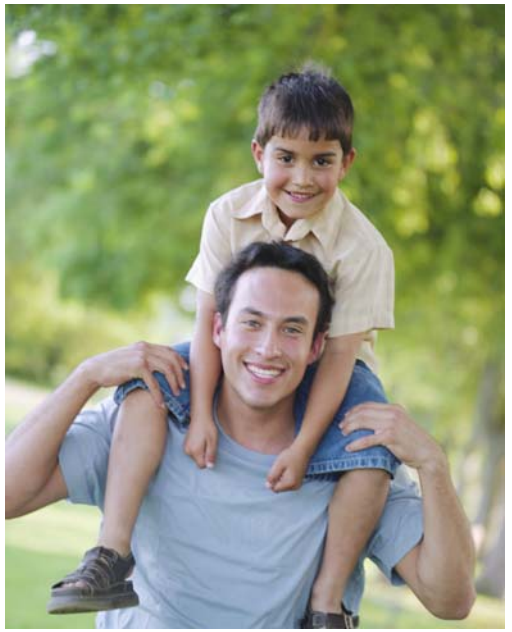
Collaborating with parents

All participating parents:

- Consent to participate in the study
- Complete a behavior rating scale
  - Receive $10 for each completed questionnaire

Intervention parents:

- Meet weekly (for 45 minutes) with behavior coach for 6 weeks
- Implement First Step at home
- Complete a satisfaction survey



Collaborating with behavior coaches

Behavior coaches:

- Attend 2-day training
  - Receive $600 stipend for each participating family
- Work 1:1 with student
  - Establish reward program
  - Teach, model, and role-play appropriate skills
- Work with classroom peers
  - Explain and reinforce program with entire class
  - Implement and monitor program for the first 5 days
- Implement homeBase component with family

Sample selection criteria

- Students begin intervention in grades 1 through 3.
- Teachers rate students using a standardized screening instrument and procedure.
  - –Systematic Screening for Behavior Disorders (SSBD).
  - –Teachers complete Gates 1 and 2.
  - –Students with highest SSBD score are asked to participate.
    - If consent is not obtained for that student, student with next highest ranking is recruited.

Student-level information

- Student Enrollment Survey

  Basic demographics (gender, ethnicity, primary language, free or reduced-price lunch status)

- Student Record Survey

  School records information:

  - IEP/504 Plan status
  - Instructional settings (i.e., percentage of instructional time in general education classes)
  - Absences
  - Office Discipline Referrals (ODRs)

Continued…

Student-level assessments

- Social Skills Rating System (SSRS) –Teacher and Parent versions
  - – Social skills, problem behaviors, and academic competence
- Woodcock-Johnson III Letter-Word Identification Subtest
  - – Reading skills
- Oral Reading Fluency (ORF)
  - – Ability to read aloud expressively
- Academic Engaged Time (AET)
  - – Active engagement in relevant academic material over two 15-minute observations

Classroom-level information

- Classroom Atmosphere Rating Scale (CARS)
  - 30-minute observation of intervention classrooms (e.g., student compliance, cooperation, problem solving)
- Classroom / Teacher Survey
  - Classroom characteristics (e.g., student enrollment)
  - Teacher characteristics (e.g., years experience, degrees)
  - Teacher support (e.g., training, classroom aides)
  - Teacher self-reported skills to work with students with behavior problems

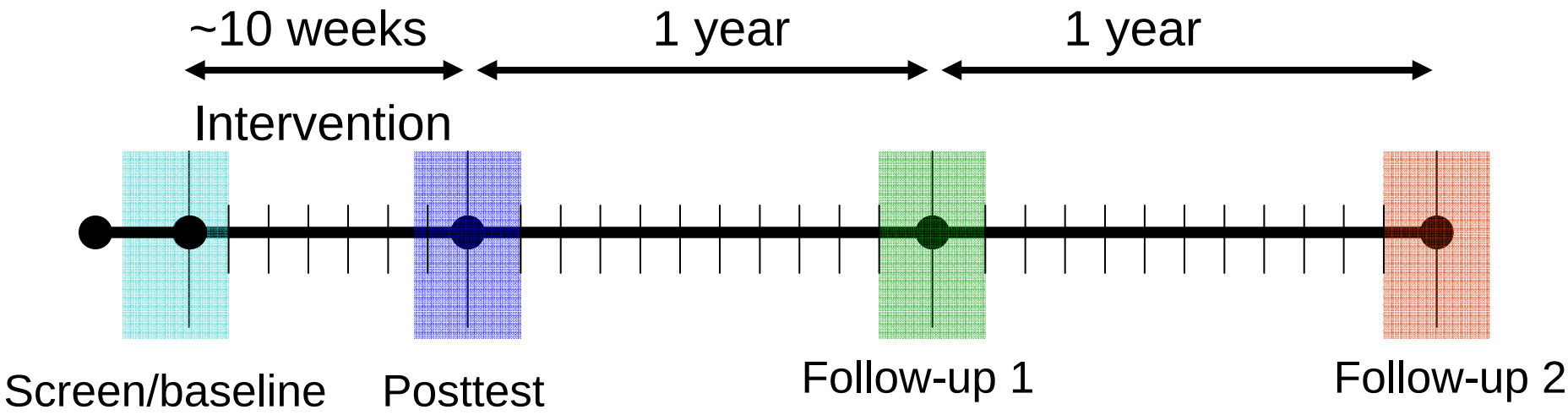
School-level information

- School Characteristics Survey
  - Student characteristics (e.g., mobility rate)
  - School climate (e.g., total number of ODRs)
  - Staff and program resources (e.g., number of FTEs)
- NCES Common Core of Data (CCD)
  - Extracted data describing participating schools and districts (e.g., enrollment, teacher/student ratio)

Implementation measures

- Fidelity
  - Integrity of program (monitored three times throughout intervention for each participant)
- Social validity (teacher's perspective)
  - Acceptability–General support for intervention
  - Positive effects–for participating student(s) and classroom
- Alliance
  - Strength of the relationship between coach and teacher

Study timeline

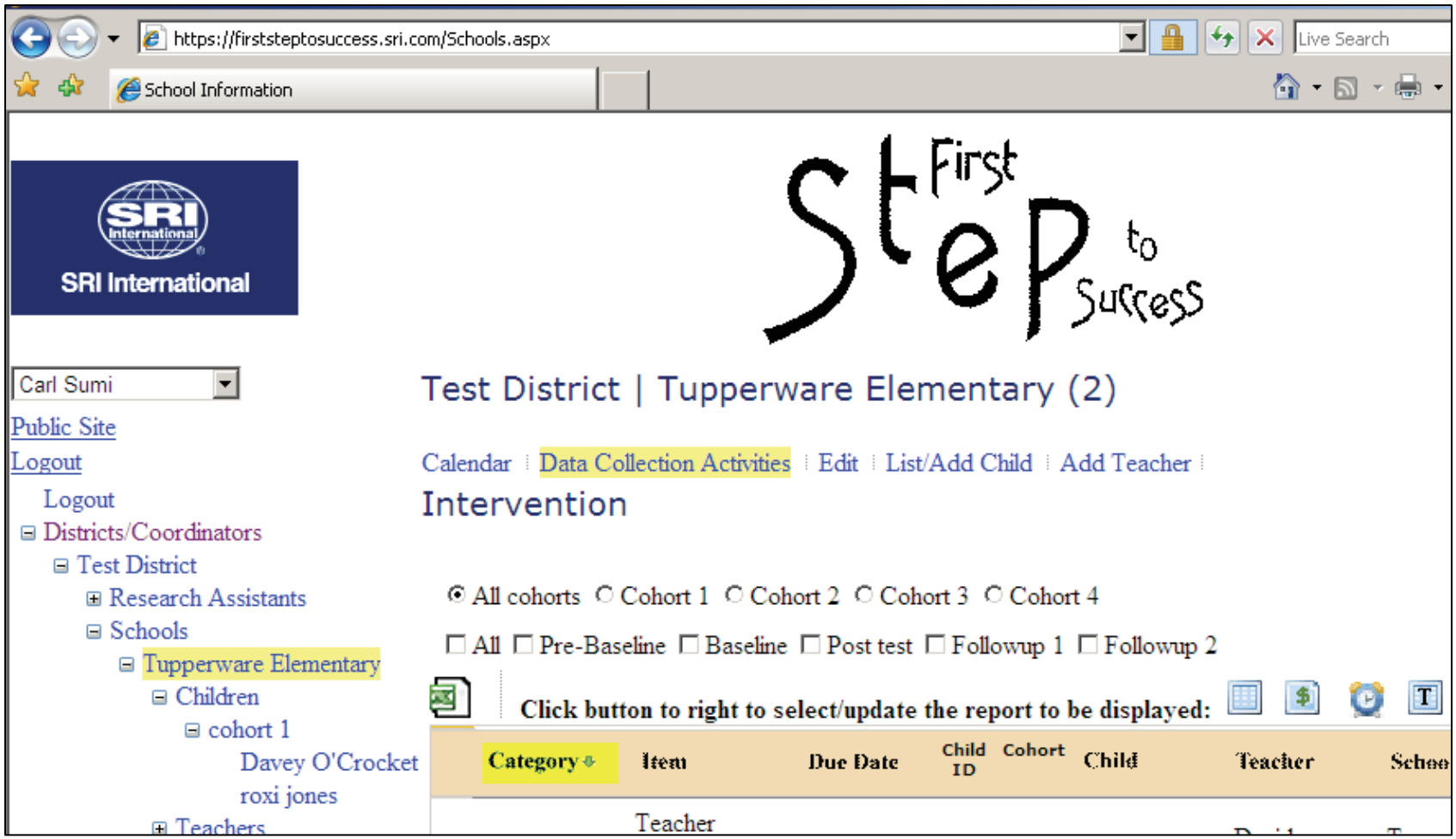


- **Screening**: SSBD
- **Baseline**: WJIII, ORF, AET, SSRS, Student Record Survey, Teacher Survey, CARS, School Survey
- **Posttest**: WJIII, ORF, AET, SSRS, Satisfaction (parent), Social Validity, Alliance
- **Follow-up**: WJIII, ORF, AET, SSRS, Student Record Survey, Teacher Survey, CARS, School Survey

Data collection processes

- Each study location has:
  - Site Coordinator
  - Research Assistants to collect the data
- All procedures and data collection forms are standardized across sites
- ORI provides technical assistance on First Step
  - "Off the shelf" approach–participants receive support when requested as provided in typical implementation
- SRI provides a web-based data collection and scheduling system

Web-based tracking system



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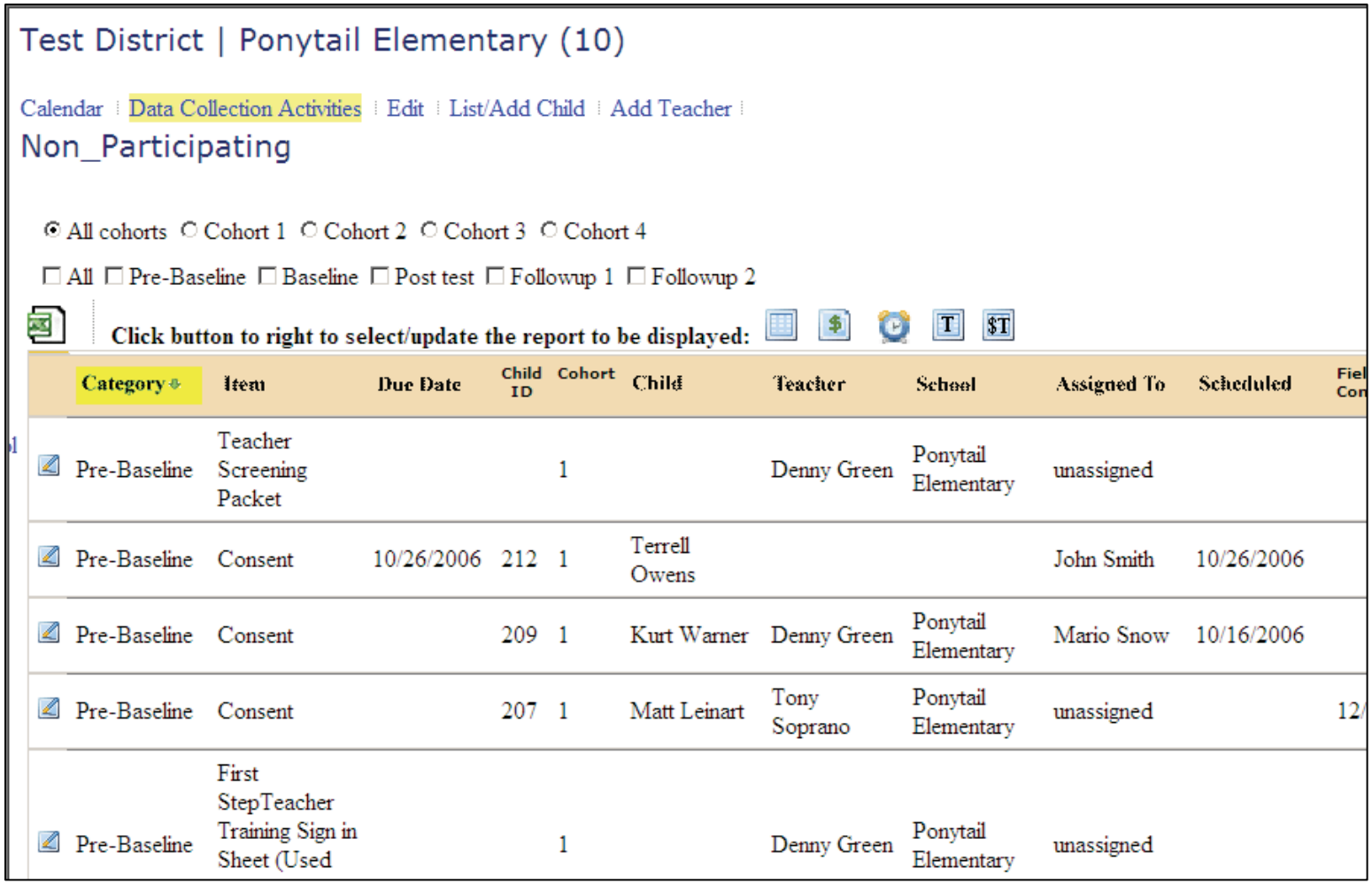
Web-based tracking system



Test District | Ponytail Elementary (10)

Calendar | Data Collection Activities | Edit | List/Add Child | Add Teacher |

Non_Participating

All cohorts | Cohort 1 | Cohort 2 | Cohort 3 | Cohort 4

All | Pre-Baseline | Baseline | Post test | Followup 1 | Followup 2

Click button to right to select/update the report to be displayed:

Category	Item	Due Date	Child ID	Cohort	Child	Teacher	School	Assigned To	Scheduled	Fiel Con
Pre-Baseline	Teacher Screening Packet			1		Denny Green	Ponytail Elementary	unassigned		
Pre-Baseline	Consent	10/26/2006	212	1	Terrell Owens			John Smith	10/26/2006	
Pre-Baseline	Consent		209	1	Kurt Warner	Denny Green	Ponytail Elementary	Mario Snow	10/16/2006	
Pre-Baseline	Consent		207	1	Matt Leinart	Tony Soprano	Ponytail Elementary	unassigned		12/
Pre-Baseline	First StepTeacher Training Sign in Sheet (Used			1		Denny Green	Ponytail Elementary	unassigned		

Continued…

Web-based tracking system

	Baseline	Process Coach Payment		209	1	Kurt Warner	Denny Green	Ponytail Elementary	unassigned
	Baseline	Process Coach Payment		207	1	Matt Leinart	Tony Soprano	Ponytail Elementary	unassigned
	Post test	Teacher post-test Questionnaire		212	1	Terrell Owens	Bill Parcells	Ponytail Elementary	unassigned
	Post test	Teacher post-test Questionnaire	12/25/2006	209	1	Kurt Warner	Denny Green	Ponytail Elementary	unassigned
	Post test	Teacher post-test Questionnaire		207	1	Matt Leinart	Tony Soprano	Ponytail Elementary	Jenny Anderson
	Post test	Parent post test Questionnaire		212	1	Terrell Owens	Bill Parcells	Ponytail Elementary	unassigned
	Post test	Parent post test Questionnaire	12/25/2006	209	1	Kurt Warner	Denny Green	Ponytail Elementary	unassigned
	Post test	Parent post test Questionnaire		207	1	Matt Leinart	Tony Soprano	Ponytail Elementary	Albus Dumbledore
	Post test	WJIII & ORF Posttest		212	1	Terrell Owens	Bill Parcells	Ponytail Elementary	unassigned

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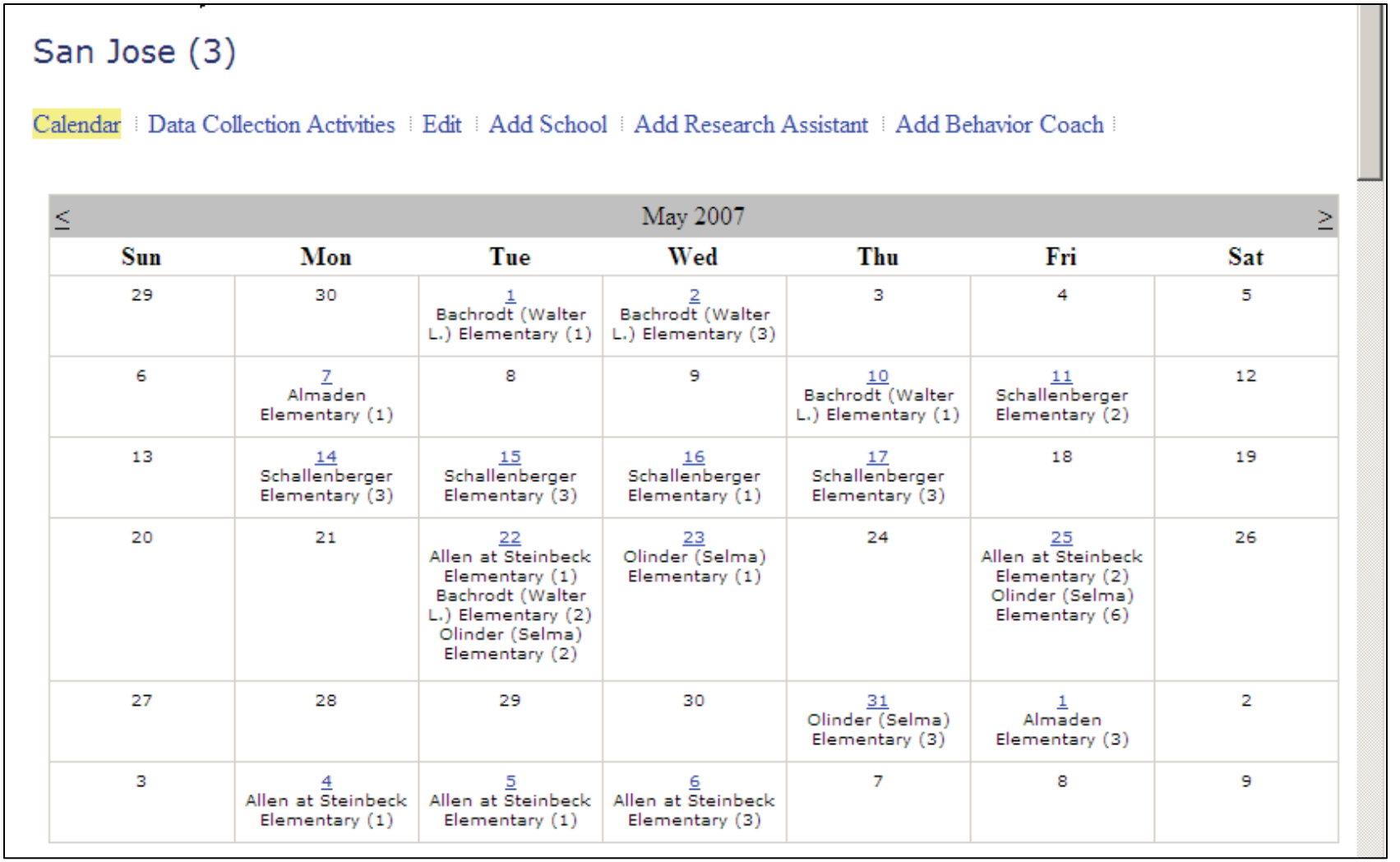
Web-based tracking system



San Jose (3)

Calendar | Data Collection Activities | Edit | Add School | Add Research Assistant | Add Behavior Coach

≤		May 2007				≥
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
29	30	1 Bachrodt (Walter L.) Elementary (1)	2 Bachrodt (Walter L.) Elementary (3)	3	4	5
6	7 Almaden Elementary (1)	8	9	10 Bachrodt (Walter L.) Elementary (1)	11 Schallenberger Elementary (2)	12
13	14 Schallenberger Elementary (3)	15 Schallenberger Elementary (3)	16 Schallenberger Elementary (1)	17 Schallenberger Elementary (3)	18	19
20	21	22 Allen at Steinbeck Elementary (1) Bachrodt (Walter L.) Elementary (2) Olinder (Selma) Elementary (2)	23 Olinder (Selma) Elementary (1)	24	25 Allen at Steinbeck Elementary (2) Olinder (Selma) Elementary (6)	26
27	28	29	30	31 Olinder (Selma) Elementary (3)	1 Almaden Elementary (3)	2
3	4 Allen at Steinbeck Elementary (1)	5 Allen at Steinbeck Elementary (1)	6 Allen at Steinbeck Elementary (3)	7	8	9

Challenges

- Managing local research teams at study sites
  - Hiring, supporting, and supervising Site Coordinators and Research Assistants remotely
  - Coordination and communication between multiple sites
- Motivation to implement First Step program
  - Value of “free” program versus district investment
- Sustainability
  - Goal to build capacity to implement First Step after grant concludes
  - District/school staff for behavior coaches

Next steps

- 2007-08 school year
  - Starting year 2 in two sites (20 schools participating)
  - Starting year 1 in three remaining sites
- To date, about 100 children participating
  - Preliminary baseline data show no differences between intervention and comparison groups on key baseline data (e.g., WJIII, ORF, AET)
- Data collection concludes in 2010-2011 school year