Developing a School-Based Screener: Maximizing Usability and Positive Consequences

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Project ESSY

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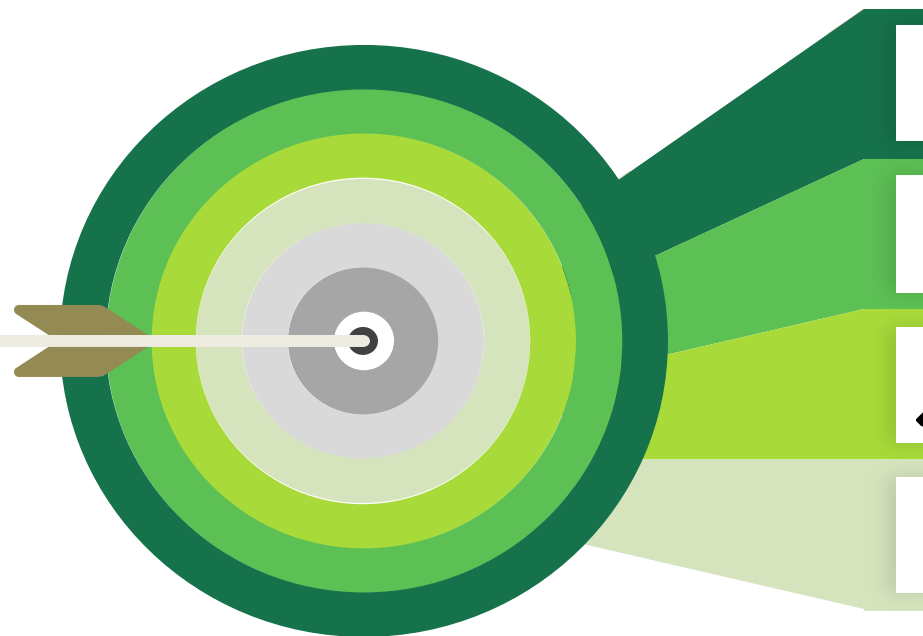Research Assistant
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Today's Session

Explain the rationale for including end users in the measure development process

Explain how gathering contextual information may aid with data interpretation

Describe key findings from interviews and cognitive pre-testing that informed revisions

Name at least 3 revisions made to the screener as a result of study findings
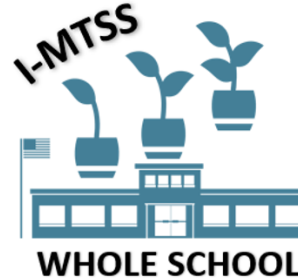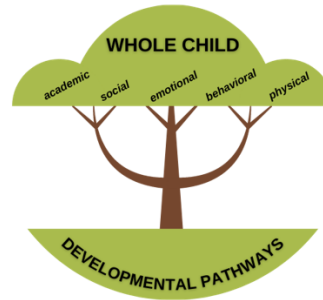
Shortcomings of Current School-Based Screeners

Many school screeners are...

- Siloed
- Deficit-focused
- Acontextual

Integrated Theory:
Whole Child, School, & Community Approach

Chafouleas, S. M., & Iovino, E. A. (2021). Engaging a whole child, school, and community lens in positive education to advance equity in schools. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2021.758788.

Project ESSY

4-year measurement project

Funded by IES, the goal of Project ESSY is to expand options in school screening. We are developing the **Expanding Screening to Support Youth (ESSY) Whole Child Screener**, an efficient assessment for providing information across important child-focused domains as well as contextual factors that can affect a student's school success.

ESSY Whole Child Screener

Project ESSY

CHILD DOMAINS Assess individual characteristics and abilities of the child	**Academic Skills** such as work completion, attention to task, grades, and engagement, interest in learning	**Physical Health** such as vision, hearing, posture, oral health, absence of illness
	Behavior such as following rules, controlling impulses, speaking kindly to others	**Social Skills** such as peer sociability, getting along with others, consideration for others
	Emotional Well-Being such as awareness of emotions, positive affect, emotion regulation	
CONTEXTUAL DOMAINS Assess relational and environmental conditions that impact child development and school engagement	**Access to Material Needs** such as food, healthcare, a safe living environment	**School Belonging** such as having a trusted adult and close friend, a sense of belonging in the school
	Attendance such as arriving on time, staying throughout the day, having few absences	**Social Support Outside of School** such as social connections in the community, buffers to family stressors

ESSY Gated Procedures

Project ESSY

ESSY Screener: GATE 1 (Broad Screen)

ACADEMIC SKILLS

BEHAVIOR

EMOTIONAL WELL-BEING

SOCIAL SKILLS

PHYSICAL HEALTH

ACCESS TO MATERIAL NEEDS

ATTENDANCE

SCHOOL INCLUSION AND BELONGING

SOCIAL SUPPORT OUTSIDE OF SCHOOL

ACCESS TO MATERIAL NEEDS can include examples such as food, healthcare, and a safe living environment.

ACCESS TO MATERIAL NEEDS can be described as:

❑ An area in need of intensive support
❑ An area in need of moderate support
❑ Neither an area in need of support or an area of strength
❑ An area of some strength
❑ An area of substantial strength

After selecting an option...
❑ Check here if **NOT** confident in rating

Shortcomings of Traditional Measure Development Approach

Voices of those who will use the measure, or those affected by measure use, are not included

Measures might be irrelevant or not feasible for implementation

By the time end users can give feedback, it's too late – Measure has already been through validation process

No explicit attention to the potential consequences of measure use

Validity

"If test developers and users want measures to have personal and social consequences and impact, then it is critical to consider the **consequences and side effects** of measurement **in the validation process itself**."

(Hubley & Zumbo, 2011, p. 219)

An Overlooked Source of Validity Evidence

Consequential Validity

Social consequences of test use
(Messick, 1998)

+ Intended positive

− Intended negative

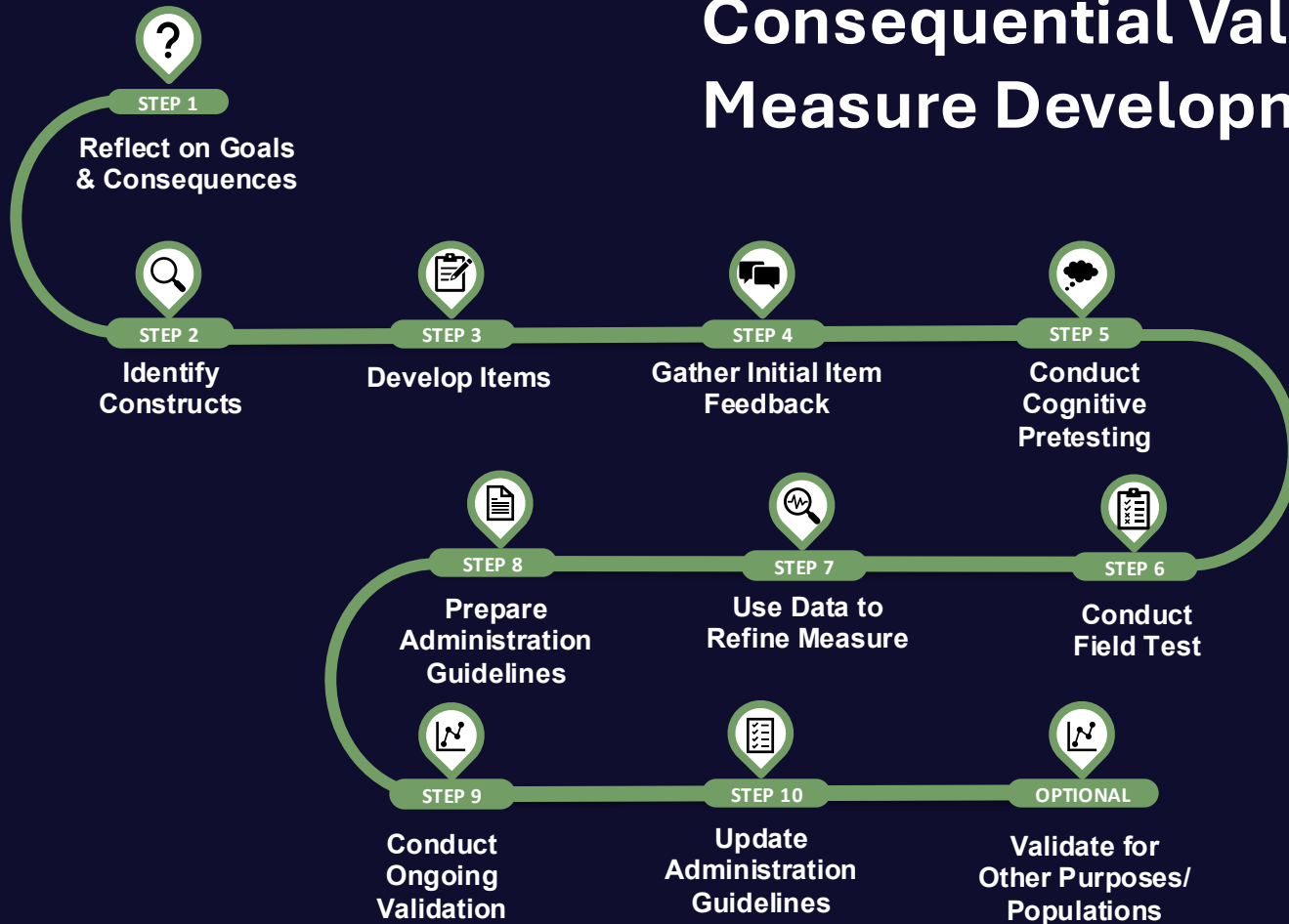+ Unintended positive

− Unintended negative
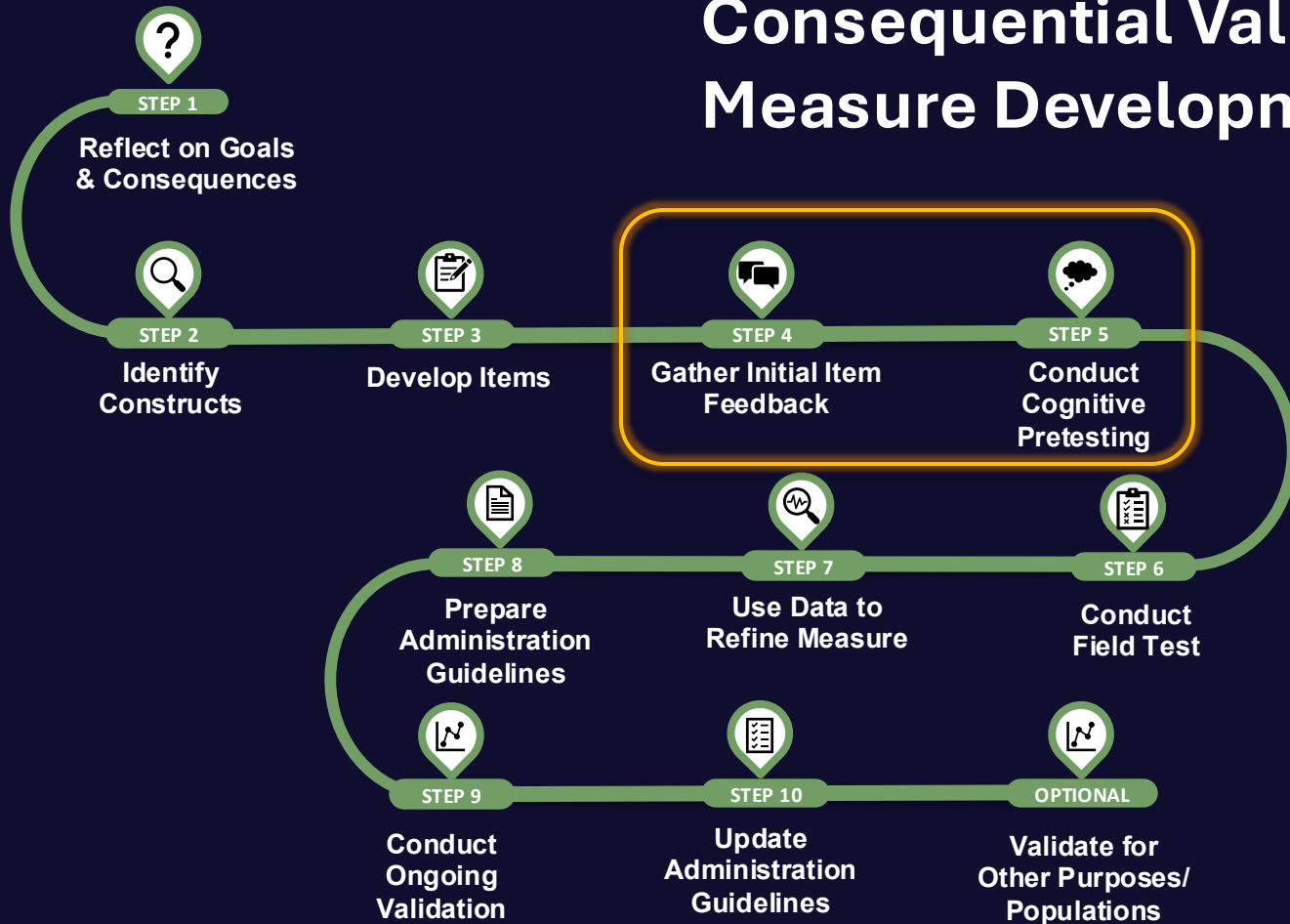
Project
ESSY
Expanding Screening to Support Youth

Methods

Northeastern
University

UCONN

Consequential Validity-Centered Measure Development Approach

STEP 1 — Reflect on Goals & Consequences

STEP 2 — Identify Constructs

STEP 3 — Develop Items

STEP 4 — Gather Initial Item Feedback

STEP 5 — Conduct Cognitive Pretesting

STEP 6 — Conduct Field Test

STEP 7 — Use Data to Refine Measure

STEP 8 — Prepare Administration Guidelines

STEP 9 — Conduct Ongoing Validation

STEP 10 — Update Administration Guidelines

OPTIONAL — Validate for Other Purposes/ Populations

(Caemmerer et al., Under review)

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Step 4: Semi-structured interviews with educators, administrators, and family caregivers

Northeastern University

UCONN

Interview Participant Demographics

Project ESSY

Gender Identity

Female
83.3%

Male
16.7%

27.8%
Hispanic/Latino

Race/Ethnicity

Black/African American

White

Other

Not reported

Multiracial

Role

3rd – 5th grade teacher	Administrator	Family liaison	School mental health professional	Family caregiver
22.2%	16.7%	5.6%	11.1%	44.4%
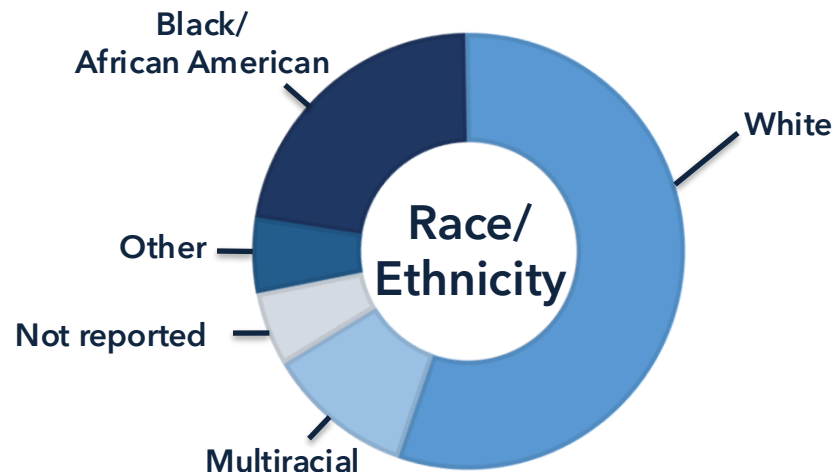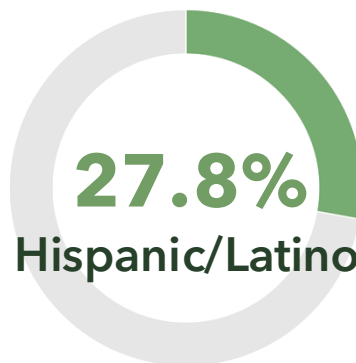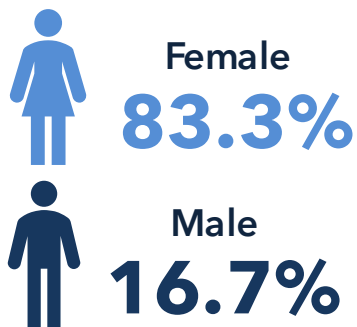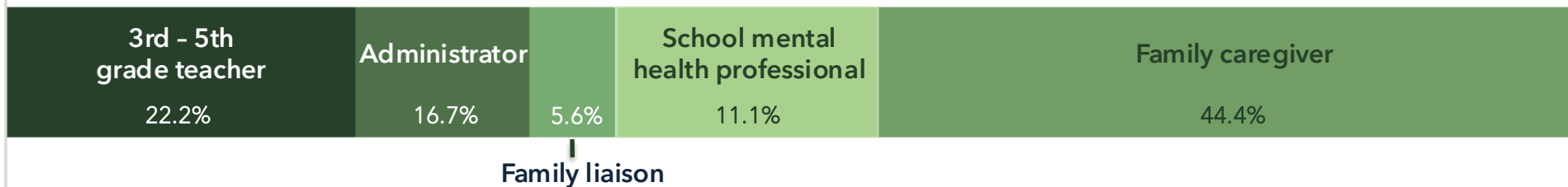
Interview Procedures

ESSY Screener: Gate 2 (Specific Level – Social Skills)

1. Student has friends/social connections (e.g., plays with friends, able to talk about things with others).

2. Student demonstrates social skills (e.g., sharing, cooperating, helping others, demonstrating empathy).

3. Student is accepted by peers (e.g., included by other children, well-liked by others, not picked on/bullied by others).

4. Student interacts appropriately with adults (e.g., included by adults, valued by adults).

5. Student is able to communicate with peers (e.g., has appropriate language skills, understood by peers).

💬 What are your reactions to these items?

💬 Are these relevant to a school setting?

💬 Are any items overly ethnocentric or could any induce bias or stereotyping?

💬 Can school personnel accurately report on these?

💬 Would these items capture students in need of support?

💬 How long to complete for 1 student?

💬 Are there any missing topics or items?

Interview Procedures

Additional questions

- Reactions to whole child screening, assessing for contextual assets and barriers in schools

- Recommendations for data reporting, interpretation, and use

- Positive or negative consequences that could result from the measure

Interviews were conducted via WebEx, lasted 52-101minutes (M = 70 min), were audio recorded, and transcribed verbatim.

Thematic Analysis of Feedback

Research questions:

1. How do school personnel and family caregivers perceive the usability of the drafted screener?
2. How can the screener be improved?
3. How can implementation of the screener be strengthened?

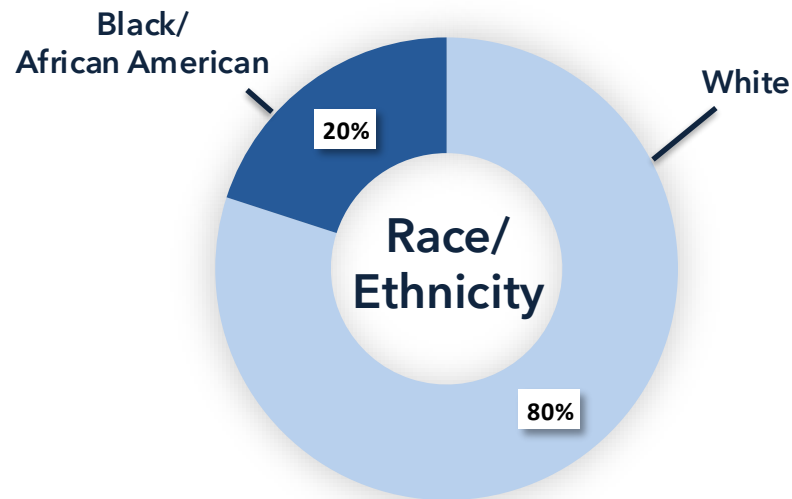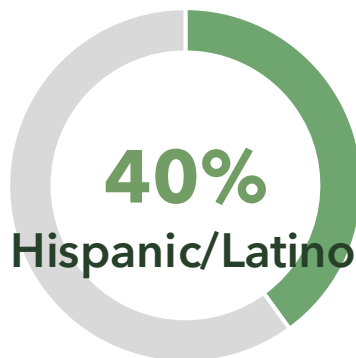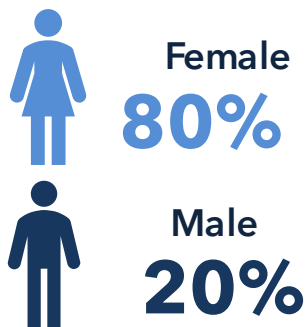|			
Two coders independently completed reflexive thematic analysis (Braun & Clarke, 2006, 2021)	Met weekly to discuss data and combine codes	Created project maps to explore relations between themes	Used Usage Rating Profile-Assessment framework of usability

Step 4: Semi-structured interviews with 3rd – 5th grade students

Interview Procedures

PART I

Students were first asked to identify the parts of their day that are most important to them

- Interviewer matched the participant's responses to the corresponding screener domain
- Asked follow-up questions

PART II

For domains not addressed by participants, a visual was shown…

Participants were asked:

(a) If they perceived the domain as impacting their school success

(b) Their preferences for sharing the information with teachers

(c) Their preferences for receiving support

Thematic Analysis

Research questions:

1. What are the various areas that students perceive as affecting their success in school?

2. Do students endorse sharing the information captured in the screener with their teachers?

3. Would students want their teachers to provide support if they were having difficulty in one or more of the areas assessed by the screener?

Two coders independently completed reflexive thematic analysis (Braun & Clarke, 2006, 2021)	Met weekly to discuss data and combine codes	Created project maps to explore relations between themes

Measure Iteration

Used interview feedback to refine measure for pre-cognitive testing

Step 5: Cognitive pre-testing with 3rd – 5th grade teachers

Interview Participant Demographics

Project ESSY

Gender Identity

Female **80%**

Male **20%**

40%
Hispanic/Latino

Black/African American **20%**

White **80%**

Race/Ethnicity

Grade Taught

| 3rd Grade (40%) | 4th Grade (40%) | Multiple Grades (20%) |

Interview Procedures

Participants were asked to…

- Use the think-aloud procedure
- Complete Gate 1 and half of Gate 2 for one student
- Complete Gate 1 and other half of Gate 2 for another student

Interviews were conducted via Zoom, lasted 37-88 minutes (M = 57 min), were audio recorded, and transcribed verbatim.

Research question:

How did educators interpret and respond to the items on the ESSY Whole Child Screener?

Findings

Step 4: Educator & Caregiver Interview Themes

Paving the Road for Usability

Potential Roadblocks to Usability

Recommended Paths Forward
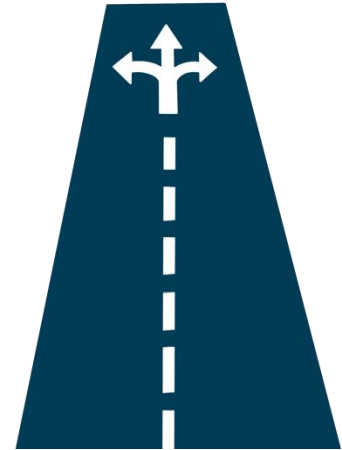
Paving the Road for Usability

- Alignment with existing initiatives
- Comprehensive yet efficient design
- Perceived benefits of assessing the whole child

"We're not only supporting the academic side, but we're also addressing barriers that families face, whether it's food, homelessness, any number of barriers. [...] We address all those questions on a daily basis with families."
-District Administrator

Potential Roadblocks

Staff buy-in?

Family reactions to contextual screening questions

Teacher rating accuracy?

Can supports be provided?

Recommended Paths Forward

Project ESSY

Optimizing Instrumentation and Data Collection Procedures

Clear and specific messaging with staff & families

Strengthening Connections to Data Interpretation and Use

Step 4: Student Interview Themes

Project ESSY

	Impacts School Success	Would Share with Teachers	Would Want Support
Academics	● All Endorsed	● All Endorsed	◐ Some Endorsed
Access to Material Needs	● All Endorsed	◐ Some Endorsed	● All Endorsed
Behavior	● All Endorsed	● All Endorsed	◐ Some Endorsed
Emotional Well-Being	● All Endorsed	◐ Some Endorsed	◐ Some Endorsed
Physical Health	● All Endorsed	● All Endorsed	● All Endorsed
Social Support Outside of School	◐ Some Endorsed	◐ Some Endorsed	○ No Endorsement
Social Skills	◐ Some Endorsed	◐ Some Endorsed	◐ Some Endorsed
School Inclusion & Belonging	◐ Some Endorsed	◐ Some Endorsed	◐ Some Endorsed

Domains where others may be impacted by disclosing and receiving support

● = All Endorsed   ◐ = Some Endorsed   ○ = No Endorsement

Step 5: Cognitive Pre-Testing

Project ESSY

Effectiveness of Instructions

Concerns Related to Scaling

Suggested Revisions to Increase Clarity

Sample Revisions

Revising or removing specific words: *aggressive, malicious intent, overactive behaviors, risky rule breaking behavior, excessive talking*

Adding items regarding IEP, ELL disability/chronic health condition status

"Access to basic needs"

↓

"Access to material needs"

Living with relatives

↓

Experiencing housing instability

Discussion

Iterations

Polishing process that has occurred across phases

Student demonstrates somatic complains

↓

Students complains of pain and/or health

↓

Student complains of headaches, stomachaches, or bodyaches

If you have feedback on any of the questions on this page, please specify which item and explain why (e.g., had trouble answering this question, wording was unclear)

Challenges

- Informants do not always agree!
    - Ex. Educators/caregivers expressed concern about some contextual items relating to resources whereas students more hesitant about relational questions

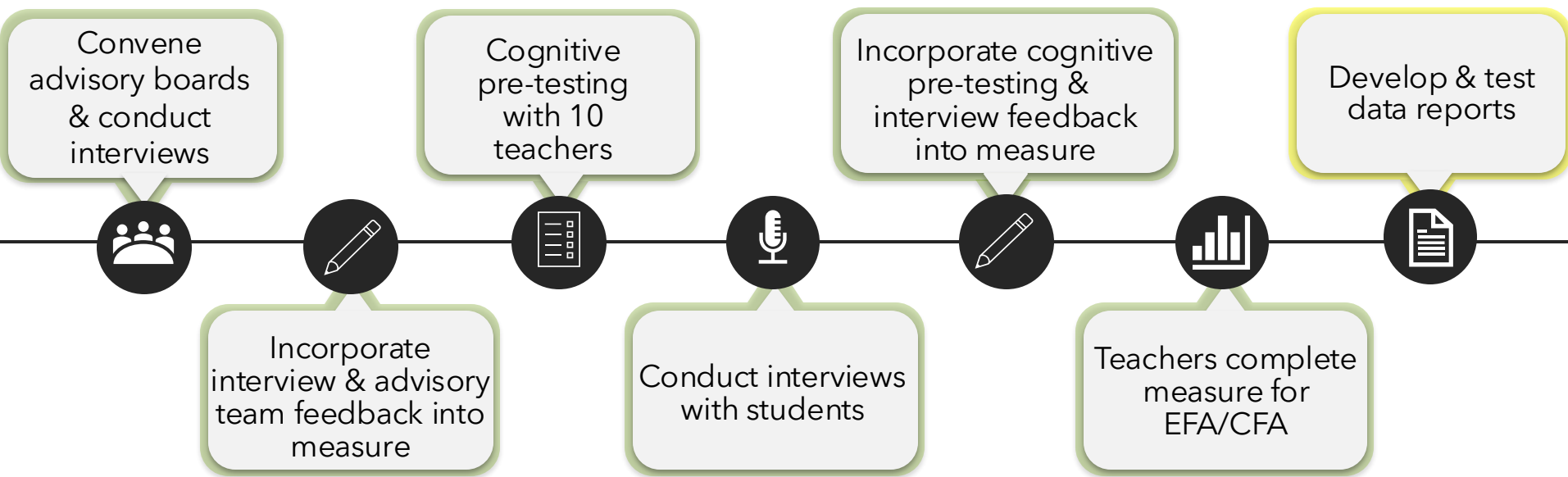# Limitations

Studies conducted with small samples of convenience

Only able to assess perceived (not actual) usability

Students only presented with subset of domains

Future Directions

Project ESSY

Convene advisory boards & conduct interviews

Incorporate interview & advisory team feedback into measure

Cognitive pre-testing with 10 teachers

Conduct interviews with students

Incorporate cognitive pre-testing & interview feedback into measure

Teachers complete measure for EFA/CFA

Develop & test data reports

Other ESSY Presentations

- Initial Psychometric Findings:
  - **PA134: Whole Child Screener Reliability and Validity Evidence** (Th 8-8:50am)

- Data Report:
  - **PO184: Optimizing ESSY Whole Child Screener Data Reporting Through Expert Feedback** (Wed 3-4:30pm)
  - **PO679: Understanding Educators' Perceptions of a Novel Universal Screener Data Report** (Wed 3-4:30pm)

Open Access Article

https://doi.org/10.1007/s12310-024-09670-w

Questions and Comments

We are looking for elementary schools interested in piloting a new screening instrument in the 2025-26 school year.

Project ESSY

For a school to participate, we are asking that:

➤ At least 2 teachers per grade (3rd, 4th, 5th) participate by completing the ESSY Whole Child Screener for each of their students, once in Fall 2025 and again in Spring 2026

➤ Participating teachers provide basic information about themselves (e.g., years teaching, grade level taught), and share their thoughts on usability of the screener

➤ School staff provide de-identified demographic information and educational data for those students involved in the screening

If you choose to participate, Project ESSY will provide:

➤ Schools with all family informational letters, training in administration, and student-level data reports (including interpretation guidance)

➤ Each participating building with $800 to defray the costs related to administrative data assistance

➤ Each participating teacher $25 each time (fall, spring) that they complete the ESSY Screener for their class

Contact our Project Manager Brittany Melo at b.melo@northeastern.edu to learn more.

Thank you!