· The evolution of child engagement, as a construct, with implications for measurement
  · Robin McWilliam, University of Alabama

· Child engagement as an outcome and a moderator within a RCT
  · Kevin Sutherland, Virginia Commonwealth University

· Child engagement within a scalable, ecologically based observation system
  · LeAnne Johnson, University of Minnesota
DEFINITIONAL AND MEASUREMENT EVOLUTION

Robin McWilliam

OUTLINE

- History of engagement
- Percentage of children engaged
- Global engagement
- Types and levels of engagement
- Rating engagement
- Qualitative description
- Translation makes us think!
Evolution of Engagement

- Qualitative description
- Types & levels
- Global engagement
- % children engaged
- Rating engagement

History of Engagement
History of Engagement

John B. Carroll
A model of school learning (1963)
"Briefly, our model says that the learner will succeed in learning a given task to the extent that he spends the amount of time that he needs to learn the task."

1985

David C. Berliner
Carroll influenced 2 movements: mastery learning (Bloom) and allocated instructional time explaining achievement differences (Wiley & Harnischfeger, 1974)

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History (cont.)

Todd Risley
University of Kansas
1965-1970s

What is the best way to teach? We have a number of ways to do it. What works, looks natural, and minimally disrupts the ongoing engagement in activities? Todd and Betty Hart suggested that it is incidental teaching, a way of imbedding teaching unobtrusively in those activities that interest the person being taught and at moments when that person is maximally open to learning.

James A. Sherman (2008)

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History (cont.)

Carl Dunst
1983-1988
Robin McWilliam

Ecobehavioral Assessment

Charlie Greenwood
CISSAR
CIRCLE
Child Academic Engagement

Sam Odom
CASPER
Widening the Circle
Percentage of Children Engaged

PLA-Check

• What % of visible children are engaged in the planned activity?

• Behavior Engagement as a Measure of the Efficacy of Early Intervention (McWilliam, Trivette, & Dunst, 1985)
• Engagement as an Indicator of Program Quality (Ridley, McWilliam, & Oates, 2000)
• E Check II used to test classification of teachers’ interaction behaviors (de Kruif, McWilliam, Ridley, & Wakely, 2000)
Global Engagement

Children’s Engagement Questionnaire

McWilliam (1991)
CEQ

- 32-item questionnaire
- Completed by adult familiar with child
- 4-point rating from Not at all typical to Very typical
- Factors: Competence, Persistence, Undifferentiated Behavior, Attention (62.1% of variance explained)
- Parents’ and professionals’ ratings congruent (McWilliam et al., 1993)
- Engagement as predisposition or trait

Global Engagement

Multivariate relationships among developmental age, global engagement, and observed child engagement (de Kruif & McWilliam, 1999)
Canonical correlation showed DA-high E and global persistence-high E relationships

Table 2
Sample items on the CEQ Factors

<table>
<thead>
<tr>
<th>CEQ Factors</th>
<th>CEQ Item</th>
<th>Item Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competence</strong></td>
<td>- Tries to complete things even if it takes a long time to finish;</td>
<td>- The child knows how to put together simple jigsaw puzzles, sticks with it until it is completed</td>
</tr>
<tr>
<td></td>
<td>- Plays appropriately for his or her age;</td>
<td>- The child who does most of the things at the 2 year-old level plays with other children or people at the 3 year-old level</td>
</tr>
<tr>
<td><strong>Persistence</strong></td>
<td>- Plays with other children who try to play with him or her;</td>
<td>- When another child approaches, the child will seek or play with him or her</td>
</tr>
<tr>
<td></td>
<td>- Tries so get adults to do things.</td>
<td>- The child who tries to get the teacher to give him or her a toy</td>
</tr>
<tr>
<td><strong>Undifferentiated</strong></td>
<td>- Plays with objects in a simple manner (i.e., repetitive, changing);</td>
<td>- The child looks at his car and over again on the high chair way</td>
</tr>
<tr>
<td><strong>Behavior</strong></td>
<td>- Uses expressive vocalization;</td>
<td>- The child says “Hi, be-be-be-be.”</td>
</tr>
<tr>
<td></td>
<td>- Watches or imitates other children.</td>
<td>- Whips the mother worry about the kitchen, talking to the child, the child watches her</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- When older children are playing, the child follows their movements with his eyes</td>
</tr>
</tbody>
</table>

Note: A copy of the full questionnaire is available...
E-QUAL (McWilliam & de Kruif, 1999)

Global and Observed Are Similar but not the Same

Table 3

<table>
<thead>
<tr>
<th>Level</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence</td>
<td>Goal directed problem solving or repeated attempt.</td>
</tr>
<tr>
<td>Pretend</td>
<td>Talking in character, substituting objects or acting out a scenario.</td>
</tr>
<tr>
<td>Participation</td>
<td>Actively involved with the environment (i.e., busy), but not in pretend play, not persistently, and not repetitively.</td>
</tr>
<tr>
<td>Undifferentiated Behavior</td>
<td>Interacting with the environment without differentiating his or her behavior (i.e., in a repetitive manner).</td>
</tr>
<tr>
<td>Attention</td>
<td>Watching or listening to features in the environment for at least 3 seconds.</td>
</tr>
<tr>
<td>Nonengagement</td>
<td>Unoccupied, waiting, staring, wandering, crying or aggressive behavior. None of the other behaviors are occurring.</td>
</tr>
</tbody>
</table>

Table 6

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental Engagement</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>1. Developmental Age</td>
<td>1.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. CFLQ Participation</td>
<td>-0.23</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. CFLQ Engagement</td>
<td>0.68</td>
<td>-0.39</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. CFLQ Undifferentiation</td>
<td>-0.16</td>
<td>-0.29</td>
<td>-0.46</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. CFLQ Attention</td>
<td>-0.87</td>
<td>-0.36</td>
<td>-0.29</td>
<td>-0.44</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6. CFLQ Nonengagement</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developmental Nonengagement</td>
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<tr>
<td>7. Developmental Nonengagement</td>
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<tr>
<td>8. CFLQ Participation</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>9. CFLQ Engagement</td>
<td></td>
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</tr>
<tr>
<td>10. CFLQ Nonengagement</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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TYPES AND LEVELS OF ENGAGEMENT

GENERALIZABILITY THEORY
(1994)

<table>
<thead>
<tr>
<th>Type</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Adults</td>
<td>Developmentally and contextually appropriate interaction with one or more adults</td>
</tr>
<tr>
<td>With Peers</td>
<td>Developmentally and contextually appropriate interaction with one or more other children</td>
</tr>
<tr>
<td>With Materials</td>
<td>Developmentally and contextually appropriate interaction with objects</td>
</tr>
<tr>
<td>Not engaged</td>
<td>Unresponsive, unnecessarily passive, or inappropriate behavior</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attentional</td>
<td>Focused visual exploration</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>Repetitive actions/interactions producing effects on the environment</td>
</tr>
<tr>
<td>Differentiated</td>
<td>Actions/interactions involving elaborations of behavior (e.g., expansions)</td>
</tr>
<tr>
<td>Encoded</td>
<td>Rule-governed actions/interactions (e.g., language)</td>
</tr>
<tr>
<td>Symbolic</td>
<td>Actions/interactions representing events or situations in the absence of referents (e.g., past events, future events)</td>
</tr>
</tbody>
</table>

McWilliam & Ware

39
How Many Sessions Needed?

Effects of classroom social structure and disability on engagement (McWilliam & Bailey, 1995)

- Engaged with adults
- Engaged with peers
  - Interactive
  - Attentional
- Engaged with materials
  - Premastery (visually or physically exploratory but not goal directed)
  - Mastery (goal directed, developmentally and contextually appropriate)
- Nonengaged
  - Active
  - Passive
Routine Type x DA Effect on Engagement With Peers

- Routines matter!
- Developmental level matters!
- Engagement type matters!

![Graph showing the effect of routines and developmental age on engagement with peers.]

Engaged With What/Whom, at What Level of Sophistication/Complexity

- Types
  - With adults
  - With peers
  - With Materials

Levels
1. Persistence
2. Symbolic behavior
3. Encoded behavior
4. Constructive behavior
5. Focused attention
6. Differentiated behavior/Participation
7. Casual attention
8. Undifferentiated/repetitive behavior
9. Nonengaged

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Child Care Quality and Children’s Engagement
(Raspa, McWilliam, & Ridley, 2001)

• All contextual quality measures but 1 associated with unsophisticated engagement.
• Only ECERS related to sophisticated engagement.
• E Check II associated with quality measures but not E-Qual III observations

Some Engagement Levels Sensitive to Some Adult Interactions

Some engagement levels sensitive to some adult interactions (McWilliam, Scarborough, & Kim, 2003)

Incidental teaching strong predictor of sophisticated engagement (Casey, McWilliam, & Sims, 2012)
Consistency of Toddler Engagement Across 2 Settings
(Aguiar & McWilliam, 2012)

• Portuguese E-Qual III (only sophisticated & nonengagement analyzed)
• Sophisticated, but not nonengagement, consistent across child care classroom and mother-child dyadic play (room in child care center)
• Consistency accounted for by CA
• Child variables predicted sophisticated, whereas environmental variables predicted nonengagement

Rating Engagement
Scale for Teachers’ Assessment of Routines Engagement
(McWilliam, 2000, 2011)

<table>
<thead>
<tr>
<th>Arrival</th>
<th>Almost none of the time</th>
<th>Little of the time</th>
<th>Half of the time</th>
<th>Much of the time</th>
<th>Almost all of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Engagement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With Adults</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With Peers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With Materials</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Complexity

- Nonengaged: 1
- Unsophisticated: 2
- Average: 3
- Advanced: 4
- Sophisticated: 5

STARE

- Catalina Morales’s dissertation (N = 102)
- More sophisticated engagement in less structured activities
- Emotional difficulties and hyperactivity mediated DA-sophisticated relationship

Means and Standard Deviations for General Engagement and by Classroom Routines.

<table>
<thead>
<tr>
<th>Classroom routines</th>
<th>Adults</th>
<th>Peers</th>
<th>Materials</th>
<th>SLE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrival</td>
<td>2.22 (1.14)</td>
<td>3.65 (1.03)</td>
<td>2.85 (1.35)</td>
<td>3.42 (1.01)</td>
</tr>
<tr>
<td>Circle time</td>
<td>3.00 (1.21)</td>
<td>3.39 (1.12)</td>
<td>2.55 (1.29)</td>
<td>3.59 (1.10)</td>
</tr>
<tr>
<td>Centers</td>
<td>2.04 (1.11)</td>
<td>4.17 (0.87)</td>
<td>4.09 (0.95)</td>
<td>4.12 (0.92)</td>
</tr>
<tr>
<td>Adult-led activities</td>
<td>2.12 (1.18)</td>
<td>3.75 (1.10)</td>
<td>2.65 (1.32)</td>
<td>3.66 (0.90)</td>
</tr>
<tr>
<td>Meal time</td>
<td>1.90 (0.90)</td>
<td>3.93 (0.91)</td>
<td>2.80 (1.56)</td>
<td>3.57 (0.95)</td>
</tr>
<tr>
<td>Outdoor play</td>
<td>1.75 (1.03)</td>
<td>4.57 (0.88)</td>
<td>3.05 (1.30)</td>
<td>3.95 (0.88)</td>
</tr>
<tr>
<td>General Engagement</td>
<td>2.66 (1.14)</td>
<td>3.61 (1.02)</td>
<td>3.37 (1.16)</td>
<td>3.71 (0.88)</td>
</tr>
</tbody>
</table>

Note. *N = 99. Five-point Likert scale (1 = almost none of the time to 5 = almost all of the time).
Qualitative Description

Routines-Based Interview

- Profile Across Routines of Engagement (PARE; McWilliam, 2017)
  - Engagement
  - Independence
  - Social relationships
### PARE Engagement Items

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do I know how the child participates in this routine?</td>
<td></td>
</tr>
<tr>
<td>How does the child spend most of his or her time?</td>
<td></td>
</tr>
<tr>
<td>How sophisticated is the child’s engagement? (Nonengaged, low level,</td>
<td>OK, high level—solving problems, persisting)</td>
</tr>
<tr>
<td>How long does the child stay with an activity (not long enough, too</td>
<td>much, enough?)</td>
</tr>
<tr>
<td>How is the child doing things (repetitively or does he or she do different</td>
<td>things)?</td>
</tr>
<tr>
<td>How does the child handle challenges/ difficulties?</td>
<td></td>
</tr>
</tbody>
</table>

### Old Foundations of Learning

- Engagement
- Independence
- Social Relationships

[Diagram showing interconnections between Engagement, Independence, and Social Relationships]
New Foundations of Learning

Engagement

Independence

Social Relationships

Translation Makes Us Think!
Translation

• Spanish: participación, involucración
• Portuguese: envolvimento
• Swedes writing in English: engagement versus participation
• Chinese: 投入 (tao-ju)—like devotion to
Acknowledgements

• Maureen Conroy and James Algina – University of Florida
• Bryce McLeod – VCU
• Institute of Education Sciences (Grants R324A080074-01, R324A110173, R305A140487 R305A150246)
• Teachers and administrators
• Families and children
• Graduate students and research assistants

Agenda

• Context
• Theoretical models
• Definitions, rating and data
  – BEST in CLASS Adherence and Competence Scale (BiCACS)
  – Teacher-Child Interaction Direct Observation system (TCIDOS)
  – Teacher-Student Interaction System (TSIS)
• Issues for consideration
Context

• IES Goal 2 project to develop BEST in CLASS
• IES Goal 3 project to test the efficacy of BEST in CLASS
• IES Goal 5 project to develop treatment integrity measures
• IES Goal 2 project to adapt BEST in CLASS for early elementary grades

Conroy, Sutherland, Algina, Werch, & Ladwig (2018); Sutherland, Conroy, Algina, Ladwig, Jessee & Gyure (2018)

BEST in CLASS Theory of Change

Risk Factors

Teacher:
- Inadequate teacher preparation and training
- Low rates of positive interactions with students
- Poor communication between teachers and families

Student & Family:
- Chronic problem behaviors
- Learning problems
- Negative interaction patterns with teachers
- Poor relationship quality with teachers
- Lack of family engagement with school

BEST in CLASS - Elementary

Practice elements:
- Supportive relationships
- Emotion regulation
- Rules
- Precorrection
- Praise
- Opportunities to respond

Practice-Based Coaching
- To increase quantity and quality of teachers' delivery of practice elements and home-school partnerships

Change Mechanisms

Teacher: Increased and targeted use of practice elements and home-school communication with high-risk students

Teacher self-efficacy

Teacher-student relationships

Outcomes

Teacher:
- Increased & High quality teacher delivery of practice elements
- Improved teacher-student interactions
- Improved classroom quality
- Increased social, emotional and behavioral competence
- Improved academic skills
- Reduced EBD symptoms
- Increased family engagement with school

Student & Family:
- Increased social, emotional and behavioral competence
- Improved academic skills
- Reduced EBD symptoms
- Increased family engagement with school
Performance-Based Model
Greenwood (1996)

Exposure
Instruction → Engagement → School Outcome
Task Quality

Theoretical model of treatment implementation

Inputs
Treatment Implementation
Outputs

Pre-Treatment → Treatment → Time → Post-Treatment
School Chars
Child Chars
Parent Chars
Teacher Chars

Relational Factors (Alliance, Involvement)
Treatment Adherence (Adherence, Differentiation)
Teacher Competence (Skillfulness, Responsiveness)

Behavioral
Emotional
Social
Pre-Academic
Engagement definition
BiCACS & TCIDOS

Engagement:
Code Engagement when the FC is participating appropriately and/or working on an assigned/approved activity. Indicators of engagement include but are not limited to:
- Attending to the material/task
- Making appropriate motor responses (e.g., writing, following rules of a game, looking at the teacher or the child speaking)
- Appropriately asking for assistance (e.g., raising hand)
- Waiting appropriately for the teacher’s instruction (staying quiet and staying in seat).

Engagement can be passive or active. For example, FC can be engaged whether or not he/she is actively responding to teacher issued OTRs.

Examples:
- FC is visually oriented to teacher reading a book and appears to be listening. (passive)
- FC is waiting his turn during a small group activity and is looking at the peer who is putting the number on the calendar
- FC is coloring a shape during a small group activity

Non-examples:
- During circle time, child lies down in the middle of the carpet and is not looking at the teacher.
- During small group, child has head down on table and is not participating in activity.

BEST in CLASS Adherence and Competence Scale (BiCACS; Sutherland et al., 2014) rating

Adherence rating: The Adherence rating of child engagement is associated with an overall rating of the FC engagement during the entire observation. For example, if the FC is highly engaged you would rate this a “7”. To receive a “7” the FC would demonstrate characteristics of engagement for the entire observation (or almost the entire observation; 95% of the time, for example). If the FC is engaged for most of the observation (e.g., 75-90% of the time) you would rate this a “5” or “6”. If the FC is engaged about 50-75% of the time the rating would range from “3” to “4”. Finally, if the child is never engaged you would rate this a “1”.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Somewhat</td>
<td>Considerably</td>
<td>Extensively</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BiCACS engagement (yrs 3 & 4)

TCIDOS rating

- Partial interval recording
- 15 min sessions per teacher-child dyad
- 10 s observation interval
- 5 s record interval
Teacher-Student Interaction System (TSIS)

- On task
- Off task non-disruptive
- Off task disruptive, aggressive, defiant
TSIS On-task definition

On Task: Focal student is exhibiting motor, verbal, and/or attending behaviors that are consistent with the expectations of the ongoing instructional activity or instructional context. Examples include verbally responding to a teacher’s questions, complying with a teacher’s request, facial/bodily orientation toward a teacher/peer/ongoing activity or making eye contact with a teacher/peer/ongoing activity. If focal student is not obviously off task, record as on task. On task includes active (e.g., answering a question) and passive (e.g., sitting quietly, looking at the teacher) engagement.

Note: If a focal student is not looking at the teacher during an activity but is exhibiting motor or verbal behaviors indicating that he/she is engaged in the activity (e.g., following the directions indicated by the teacher), the focal student will be considered On Task. Similarly, if it is acceptable for the focal student to chat with peers, code as On Task as long the behaviors of the focal student are consistent with the expectations of the instructional context.

How to tell if a student is engaged during circle time?

– Body of student is oriented towards the teacher/focal student group
– Student is not doing any of the following:
  – Playing with materials not pertinent to circle time
  – Focusing attention on a clear, identifiable target that is irrelevant to instructional time
  – Blocking eyes/face so that student cannot see the teacher/focal student group (hands over face, moving behind chair so cannot see teacher)
  – If the teacher stops instruction to handle a situation unrelated to instruction (e.g. another teacher comes into the room, teacher leaves circle time to get a book, teacher has to tend to the needs of another student), then focal student can engage in fiddling/talking to each other, and it still be considered on task.

TSIS rating

• Momentary time sample recording
• 5 min observation (2 cycles per FS per observation)
• Every 10 s
• 60 time samples per observation cycle
Issues for consideration

- Conceptual
  - Engagement as aspect of child responsiveness within implementation models
  - Engagement as mediator of treatment effects
  - Engagement as outcome of treatment

- Definition
  - Active v. passive

- Measurement
  - Use of rating scale
  - PIR v. MTS
    - Tendency of PIR to overestimate behavior (e.g., Prykanowski et al., in preparation)

References


Developing Scalable Systems to Measure and Enhance Engagement

LeAnne Johnson, PhD
University of Minnesota

Conference on Research Innovations in Early Intervention
March 3, 2018

Context: Purpose Matters

Intervention efficacy trials focused on improving developmental outcomes that include engagement as an outcome “of interest.”

When findings are not always consistent with hypothesized outcomes, explore fidelity, contextual fit, and other moderator variables.

Statewide professional development systems that are focused on improving developmental outcomes through improving classroom quality.

There are no findings as of yet as the data systems to support rigorous evaluation are still being developed.
Context: Classroom Quality...
It’s Just Not that Simple

Practices Associated with Classroom Quality

- Child Active Engagement
- Child Self-Regulation

Impact of Federal Outcomes and Developmental Learning

- a. Dominguez et al. (2010); Keys et al. (2013)
- b. Chien et al. (2010); Raspa et al. (2001)
- c. Chien et al. (2010); Greenwood et al. (2002); Raspa et al. (2001)
- d. Willford et al. (2013)
- e. Dominguez et al. (2010); Raver et al. (2010); Willford et al. (2013)

The Realities of Adult Interactions in Natural Environments

Dependency between Adult Delivered Interaction and Child Communicative Behavior*

*Note: Adult delivered interaction = pooled opportunities to respond, prompts, and models. Child communicative behavior = pooled speech, aided AAC, and unaided AAC.
The Realities of Adult Interactions in Natural Environments

Dependency between Child Communicative Behavior and Adult Responsive Interaction*

*Note: Child communicative behavior = pooled speech, aided AAC, and unaided AAC. Adult responsive interaction = pooled teacher interpretation and teacher provide/actively respond.

Associating Adult Interactions with Child Engagement

Ford, Young, & Earhardt (2015)
The Logic of our Current Work

Project Engage: Developing a Cloud-Based Measurement System for Data-Informed Implementation of Practices Promoting Children’s Active Engagement (IES Award #R324A170032)

Definitions and Measurement of Engagement that Served a Purpose for Others

- Many define engagement independent of adult behavior and context
  - “child attends to the activity or adult prompts”
  - “manipulating material”
  - “head oriented toward task”
  - “participating in a communicative exchange”
  - “observing another student”
  - “making eye contact with the task or teacher”

- With measurement focused on the behavior of one child at a time using interval or momentary time sampling within a research context or ratings when used by practitioners
Challenges with Applying Existing Definitions and Measurement for Our Purpose

- Child specific coding = child specific behaviors that may exclude some children when purpose is to evaluate an entire class (e.g., eye gaze, communicative exchange)
- Within a scalable system, existing measurement approaches are not feasible (e.g., MTS 15sec) or able to be summarized for or across classes (e.g., individual ratings)
- With the purpose of promoting changes in adult behaviors, the adult role in establishing the context is central
- Many existing definitions require inferences that introduce measurement error that increases with practitioner use with a broader range of developmental skills (e.g., attending, displaying behaviors appropriate for the tasks). Hence... our decision to focus on non-engagement

Our Framework for Defining Non-Engagement (Not Actively Engaged)

1. Has the learning context been established for active participation?  
   - No → Non-engaged  
   - Yes → 2.
2. Is the child’s body use aligned with the learning context?  
   - No → Non-engaged  
   - Yes → 3.
3. Is the child’s use of objects aligned with the learning context?  
   - No → Non-engaged  
   - Yes → 4.
4. Is the child participating as expected within an interaction?  
   - No → Non-engaged  
   - Yes → Engaged

Engaged
Things we are Hoping to Learn with the Approach taken in Project Engage

- Will our definition of non-engagement facilitate an estimation of active engagement that is valid for children with varying developmental skills in varying early learning contexts?

- Our definition hypothesizes that different components may hold different “weights” within a hierarchy of decision making. Will that hierarchy hold up?

- Will we be able to demonstrate a relation between adult behavior and class-wide engagement and if so, will that promote change in adult behaviors?

- If all of this holds up as a valid approach:
  - Are there generalizable differences in engagement across different types of classroom routines and different types of early childhood programs to inform differentiated practice needs?
  - Does engagement mediate growth on developmental outcomes and if so, are there optimum levels of engagement that promote growth on developmental outcomes?

Implications for the Approach taken by Project Engage on Inferences that may be Made

- These will be class-wide “temperature checks” of the classroom ecology during brief observations.

- Our definition is based on children actively doing something within an active learning context that was actively established by the adults. We are actively excluding passive forms of engagement.

- Engagement is defined relative to whether or not adults set a context for active engagement. This dependency within the definition may influence how and when this type of approach should be applied.
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Discussion

• When should we include engagement in a study?
• Is engagement most interesting as
  • A predictor of some other outcome?
  • An outcome of some intervention?
  • A moderator or mediator
Discussion

• When do we need to simplify engagement as bivariate—yes or no?
• Do you think engagement should be measured by
  • % engaged in some studies
  • % time spent in other studies?

• What do you think of considering engagement at different levels of complexity?
• Is engagement too close to other constructs?
• How can we find out about engagement in unstructured settings (e.g., home)?
Discussion

• What do you think about the idea of engagement propensity?
• If engagement is a prerequisite for learning, what are the implications in intervention research? Like researchers measure fidelity of implementation, should we always measure child engagement?