Building Adult Skills to Enhance Early Childhood Education Impacts: New Directions in Programs for Families in Poverty

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The Problem

Post-test effect size on cognitive and achievement outcomes of ECE programs, 1960-2007: +.33 (Leak et al., 2013; Forum on Early Childhood Programs and Policies meta-analysis); average rate of “fadeout” .03 ES per year

How to maximize and sustain benefits of quality early childhood education programs?

**Build adult skills** that make a difference for children’s longer-term outcomes:

- Parents
- Caregivers
- Teachers
- Other adults important in children’s lives
But which skills?

Across the Family Process / Care Setting Climate:

Responsiveness
Warmth
Cognitive stimulation
Planning / organization
Executive function

How can these skills be built among parents? Among caregivers and teachers?

This presentation – new program models for building skills
1) in parents; 2) among caregivers and teachers in conjunction with early childhood education
Dual-Generation Programs: Parent Interventions + ECE
History

2 generation programs’ central logic:
Quality program for children’s learning (usu center-based) + support services for parents *simultaneously* provided for bigger impact on children than either alone
1) Head Start and its precursors
2) Prominent two-generation programs of the 1980’s
   Why did they fail to transform the field?
3) Related work from the 1990’s and 2000’s
   Employment / welfare to work policy experiments
   Integrated services
4) How could the next phase be different?
From services to targeted skills and greater understanding of circumstances under which skills grow
Research Question

What kind of parent education / added family support might provide added benefit to early childhood education re: children’s cognitive and achievement outcomes?

Meta-analysis (88 studies, 167 contrasts)

Overall, no added benefit from addition of any parent support service

When parent education provided opportunities for practice (i.e., with parent and child together; not didactic parenting education without child present) and feedback from a facilitator or home visitor, added benefit

These programs typically provided the support in home visits
Building Skills vs. Providing Information: Results from Meta-Analysis of ECE Programs

(Grindal, Bowne, Yoshikawa, Duncan, Magnuson, & Schindler, 2013)

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Child Outcomes of Early Childhood Education Programs 1960-2007

Source: Grindal, et al. (2012)
Example of 2-Generation Program Successfully Improving Targeted Parent Skills

Fisher & Kim 2007; Fisher, Stoolmiller et al., 2007

Adaptation of *Multi-Dimensional Treatment Foster Care* program for preschool-aged children involved in foster care system
(For parents: consultant support for parenting, daily check-ins, group sessions
For children: individual and group behavior management sessions);
Improved attachment and child behavior compared to randomly assigned control group of foster-care involved children
Daytime cortisol patterns of children reflecting lower levels of stress response
Clinically-based models of behavior change being applied in community program models

Rahman et al., 2008:
Training in Cognitive-Behavioral Therapy techniques for community health workers in Pakistan to reduce maternal perinatal depression, identified in last month of pregnancy (Rahman et al., 2008, 2011); large reductions in CRT (40 clusters of home health workers) in diagnosed depression rates at 12 months (27% C; 59% E)

Shaw et al., 2008, Dishion et al., 2009:
Family Check-Up program – training facilitators in adapted Brief Motivational Interviewing to help low-income identify and develop action plans for family and child goals
Coupled with parenting behavior management program for those who identify parenting as a goal (~40% of experimental condition parents)
Improvements in children’s behavior and observed parenting
Building Parents’ Job Skills in ECE

Workforce Development + Early childhood education (Ascend at the Aspen Institute, 2011)

Example: CareerAdvance® program, Tulsa OK
Based in Early Head Start / Head Start programs across Tulsa

• Skills training in growth sectors, e.g., healthcare and allied health, healthcare information technology, nursing

• Contextually based adult ed/GED/ESL instruction

• Weekly peer support meetings at Head Start, facilitated by career coach

• Workforce intermediary services

• Conditional cash (in-kind) incentives
Parent Skills + ECE Program Future Directions

Does adding take-up of quality early child care / preschool add to the impact of effective parenting programs (such as NFP or Multi-Dimensional Treatment Foster Care)? For whom?

Does adding a human capital development program to ECE provide added benefit for children’s development?

Can approaches from brief mental health treatment and adult development be applied to these programs?

Do these programs affect parents’ goal setting and goal-directed behaviors, organizational skills, EF skills in addition to “traditional” parenting skills?
Relationship and Network-Based Approaches to Building the Skills of the Early Childhood Workforce
Building Skills in Caregivers and Teachers

Trainers / Coaches / Facilitators

Caregivers / Providers

Children

Adult Skills:
- Warmth / responsiveness
- Teaching / scaffolding / mentorship
- Richness of language interaction

How can the adult learning context between trainers / coaches and caregivers / providers best be structured? Roles of dyadic relationships vs. social networks vs. didactic classes?
Didactic course accompanied by on-site coaching for center- and home-based child care providers: Bigger Impact on language instruction quality than course alone (Neuman & Cunningham, 2009)
Building Adults’ Motivation and Skills together

Adults in the EC workforce benefit from chances to practice new skills, give and receive feedback:

a) In the context of their everyday work;
b) In the context of trusting relationships and networks that support not only concrete skills, but also motivation and purpose.
Relationships as Contexts for Skill Building: New Evidence on Coaching
Combination of Curriculum and Coaching: Key to Preschool Quality?

CURRICULUM: Sequence of activities and materials tracking and facilitating growth in specific domains of developmental skills (Clements, 2007)

COACHING: Regular on-site observation, modeling and feedback in context of trusting relationship

Examples: Bierman et al., 2010; Lonigan et al., 2011; Piasta, Justice et al., 2012; Raver et al., 2011
Examples

Bierman et al., 2010
Combination of behavior management (Preschool PATHS) with language curriculum implemented in Head Start
Support of Coaches 2 or 3 times a month in the classroom
Impacts in cluster-randomized trial on children’s reduced behavior problems and improved language

Raver et al., 2009
Adaptation of Incredible Years behavior management program
Support in behavior management provided by mental health consultant weekly in the classroom; first component on rapport and motivation
Intensive support for children with extreme behavior problems
Impacts, CRT: children’s reduced behavior problems, improved EF, improved language outcomes
Boston: Test of Curriculum + Coaching at Scale

- Boston Public Schools’ prekindergarten program: rapid expansion
- 2008 assessment of observed quality: mediocre
- Decision to stop expansion and invest in quality
- Implement evidence-based language and math curricula (OWL and Building Blocks)
- In-classroom coaching supports (one set of coaches supporting 2 curricula)
- First study of curriculum + coaching combination at scale across an entire large urban district
Sample

2,018 children (in 67 schools)

Race/ethnicity
11% Asian, 27% Black, 41% Hispanic, 3% Other, 18% White

Home language
50% English, 27% Spanish, 22% Other

Gender, Free/reduced lunch, and Special needs
51% male, 69% receive free/reduced lunch, 9% special needs

Final sample represents 85% of schools & 70% of eligible children in those schools

969 before cutoff (prek 2008-2009)
1049 after cutoff (prek 2009-2010)
Birthday-cutoff based Regression Discontinuity Design

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SEPTEMBER 1 BIRTHDAY CUTOFF

Moderate to Large Effects on Language, Literacy, and Mathematics
(Weiland & Yoshikawa, 2013, *Child Development*)

![Bar chart showing effect sizes for different assessments.](image-url)
Small positive effects on Executive Function Skills

- Backward DS (working memory): 0.24***
- Forward DS (working memory): 0.24***
- Pencil Tap (inhibitory control): 0.21***
- DCCS (inhibitory control): 0.28***
- TOQ Attention (att. shifting): 0.11
Professional Networks as Contexts for Skill Building
Un Buen Comienzo

- Goal: To improve quality of public preschool education in Chile in low-income municipalities
- Teacher professional development through 2X a month coaching with foci of language, respiratory health and behavior management (2 year program)
- Low-income municipalities of Santiago
- First cluster-randomized evaluation of ECE improvement in S America
- N: 64 preschools, 91 classrooms
Effects on the CLASS, After Year 1 of Intervention (PreK Classrooms)

Statistical significance levels are indicated as $\sim = .10$, $* = 0.05$, $** = 0.01$, $*** = 0.001$
Effects on the CLASS, After Year 2 of Intervention (K Classrooms)

Statistical significance levels are indicated as ~ = .10, * = 0.05, ** = 0.01, *** = 0.001
Expansion of UBC to Region VI

Goals in expansion of UBC outside of Santiago:
- Retain its core approaches but increase intensity/dosage
- Build ownership and motivation
- **Build skills** –
  - to implement UBC program;
  - to define quality improvement goals within UBC and actions to achieve them;
  - to conceptualize and measure quality improvement at daily and weekly time scales

How?
- Continuous Quality Improvement model from the Institute on Healthcare Improvement
- First implementation of this model in early childhood education
Applying Continuous Quality Improvement to Education and Child Development (Bryk, Gomez, & Grunow, 2010; IES, 2013)

A method of improvement for the extension & adaptation of existing knowledge [i.e., existing theory of change] to facilitate multiple adjustments with the goal of achieving a common goal. Donald Berwick, 2003, Journal of the American Medical Association
Networks Motivate Learning, Buy-in and Quality Improvement

Networked Learning Communities across family, school, municipality and regional levels

- Principals, teachers, aides, UBC coaches, parents, municipality departments of education; health centers, MINEDUC.
- Work together for a defined period of time (9 to 24 months).

Learning Session 3-month Cycles: Supplementing Coaching Model

- Learning Session I – meet to establish initial targets for change in each component of UBC and determine measures for “tests of change”
- Implement improvement strategy + design assessments to measure it (“tests of change”) daily / weekly over 3 months
- Learning Session II – Second Learning session to review improvements; troubleshoot; set new short-term improvement targets and tests of change
- Implement improvement strategy + new tests of change over 3 months
**Global Aim:**
Improve the quality of preschool education by promoting the holistic development of vulnerable children through an intervention in 4 essential areas: Language, socioemotional development, health and family involvement.

**SMART Aim**
In 1 academic year in 29 schools of the VI region, increase by 20% children with “fluid” levels of language development (comprehension, writing and vocabulary).

**Primary Drivers**
- Increase from 40% to 60% the children who achieve “fluid” oral comprehension
- Increase from 65% to 80% the children who achieve “fluid” vocabulary
- Increase from 19% to 40% children who demonstrate age-appropriate writing
- Increase from 26% to 50% children who demonstrate prosocial behavior and from 8% to 15% children who wait their turn and follow instructions
- Increase from 60% to 80% average daily attendance in UBC classrooms
- Increase family involvement in children’s learning by increasing attendance to parent-child learning sessions from 62% to 80%
- Achieve 70% of school leadership teams design and implement a test of change designed to improve quality of prekinder and kindergarten included in their Annual Action Plan
Change idea: increase the frequency of writing activities to twice per week
Overweight / Obesity Prevention
Test of Change Measure

**Goal:** To eliminate sugar-sweetened beverages brought from home, and increase water rather than soda consumption in preschool classrooms
Test of Change Results Reflect Skill Development in Quality Improvement Implementation and Measurement

**Goal:** To eliminate sugar-sweetened beverages brought from home, and increase water rather than soda consumption in preschool classrooms.
Conclusion: Directions For Future Research / Practice

• Does a focus on adult skills sustain benefits of ECE programs?
• Which adult skills matter most for children’s development? Across domains (EF / responsiveness / language / behavior management)? Across parents vs caregivers / teachers?
• How can theories of adult learning and MH contribute to interventions to build adult skills in ECD?
• Relative benefits of dyadic vs network / group level motivation development (coaching vs. networked learning community – combinations; synergistic effects)
• What is the role of developing motivation for adults as providers or parents prior to skill development? How can we measure this?
How Should Adult Skill-Based Programs in ECD be Tailored / Targeted?

To skill levels / stage of development of different parent / caregiver / teacher populations

To characteristics of different young child populations

To preferences and goals of different parent / caregiver / teacher populations

To levels of resources / socioeconomic status

To economic conditions of surrounding labor market
Thanks

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References


