Starting Early: The Benefits of Attending Early Childhood Education Programs at Age 3

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The benefits of early childhood education

• Children benefit academically
  • Landmark programs: Perry and Abecedarian
  • Contemporary programs: Tulsa, Tennessee, Boston

• Inconclusive evidence for children’s social behavior and executive function skills

• Whether immediate benefits persist is also inconclusive
  • Models of skill-building
  • Convergence: program impacts tend to diminish in the year or two after program completion
Convergence in the benefits of early childhood education

- Convergence can result from either:
  - Catch-up by children who did not attend early education
  - Fade-out among early education graduates
To expect effects [of early childhood education programs] to be sustained... at their initial high levels, in the absence of continued high quality schooling... is to believe in magic

Jeanne Brooks-Gunn
Research questions

1. Do children who attended ECE at the age of 3 demonstrate stronger school readiness skills at the start of the following school year as compared with children without prior ECE experience as 3-year-olds?

2. To what extent do benefits of ECE participation at age 3 persist through the end of the following school year, and is there evidence for convergence?

3. To what extent is convergence attributed to catch-up among children who did not participate in ECE at age 3 as compared with fadeout among those who did?

4. What share of this convergence is attributed classroom-wide factors at age 4?
Methods and context

• Urban county: 186,000 students in public schools
• Roughly 1,500 children were sampled in pre-K
  • 204 children attended an early childhood program at age 3
• Children’s school readiness was assessed at pre-K entry and exit
  • Academic achievement: Woodcock Johnson
  • Executive function: Pencil Tap, Backward Digit Span, and the Head-Toes-Knees-Shoulder Task
  • Social behavior: Teacher-Child Rating Scale
• Regression models that control for a full set of child and family factors
Benefits of early childhood education participation at age 3

Notes. *** p < .001. ** p < .01. * p < .05. + p < .10
Catchup or fadeout?

Notes. *** p < .001. ** p < .01. * p < .05.

25% of convergence was attributed to classroom-wide factors.
Conclusions

• Findings highlight the benefits (i.e., achievement) and potential drawbacks (i.e., social-behavior) of early childhood programs serving low-income children.

• Findings also lend support to the sustaining environments hypothesis: Investments in early childhood education are necessary but not sufficient.

• Convergence, at least in the short-term, can be partially mitigated and teachers and classrooms play an important role in this effort.
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Any questions?

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