TN VPK Effectiveness Evaluation
What has been found so far?

Summary and Context
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- Supervisors, Principals, Teachers, Secretaries across TN

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Controversy about PK and the study

- The Tennessean: Pre-K gains may not stick, Vanderbilt study finds
- WBIR Channel 10: Knoxville reps' views on pre-k vary from 'hype' (Dunn) to 'great' (Johnson)
- Governor Haslam: Wait and see!
- Comments from Steve Barnett, director of National Institute of Early Education Research (NIEER) at US DOE: Focus on quality (which takes more funding) and expanded access
Summary of Findings

• Part 1 of the Vanderbilt study of Tennessee Voluntary Pre-K (TN-VPK) involves more than 3000 children randomly assigned to attend or not attend Pre-K.

• Over 1000 were assessed individually from the beginning and end of pre-k through kindergarten and first grade, with more follow-up underway.
Districts Involved in the RCT
The major findings to date: PK Year

- TN-VPK children made significantly **greater gains** on measures over the pre-k year
  - Literacy – Letter Word Identification and Spelling
  - Math – Applied Problems and Quantitative Concepts
  - Language – Oral Comprehension and Picture Vocabulary

- They were **rated higher by their teachers** in comparison to similar children who did not attend
  - Better prepared for kindergarten
  - Having better social skills
  - Having better work-related skills
Pre-K Gain – Composite WJ

![Graph showing Pre-K Gain - Composite WJ with a red line for TN-VPK Participants and a blue line for Nonparticipants. The graph indicates a .33 SD (45% increase) for TN-VPK Participants and a .73 SD for Nonparticipants, representing the difference between Pretest and Posttest scores.](image-url)
## Effects of TN-VPK: Pre-K Gain on Teacher Reports

<table>
<thead>
<tr>
<th>Measure</th>
<th>TN-VPK Effect Estimate</th>
<th>p-value</th>
<th>Effect Size</th>
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<tbody>
<tr>
<td>Cooper-Farran Social Behavior</td>
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<td>Cooper-Farran Work-Related Skills</td>
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<td>ACBR Preparedness for Kindergarten</td>
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<td>ACBR Behavior Problems</td>
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<td>ACBR Feelings About School</td>
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</tbody>
</table>
WJ Standard Scores Gain in Pre-K for students attending Pre-K

Standard Score Points Gained

- Letter-Word ID
- Spelling
- Oral Comp.
- Picture Vocabulary
- Applied Problems
- Quantitative Concepts
End of Kindergarten & Grade 1

- By the end of the kindergarten and first grade years, the **academic achievement differences** between children who attended TN-VPK and those who did not **had diminished** and were no longer statistically significant.

- Similarly, **ratings of academic preparedness and classroom behavior** by the first grade teachers **showed no differences** between TN-VPK participants and nonparticipants.
Example

Letter-Word Identification

Adjusted Standard Score

4 5 6 7
Nonparticipants VPK Participants
K & Grade 1: Other Measures

- Significant TN-VPK effects were found on some important “non-cognitive” aspects of performance at the end of the kindergarten and first grade years:
  - Fewer TN-VPK participants were retained in kindergarten than nonparticipants
  - School attendance in first grade was somewhat better.
Full Sample: Grade Retention in Kindergarten

- TN-VPK Nonparticipants: 8.0%
- TN-VPK Participants: 4.0%
Full Sample: Attendance (Cohort 1 only)

- **Kindergarten**
  - TNVPK: 156.6
  - Nonparticipants: 158

- **1st Grade**
  - TNVPK: 160.6
  - Nonparticipants: 164
Putting these Findings into Context
The effects found for TN-VPK are similar to those found in other studies

- Studies of preschool programs have typically found gains in cognitive skills immediately following the program and then diminish in later years.

- Those same studies have also often found long-term impacts on other indicators of performance such as grade retention, attendance, disciplinary actions, special education referrals, and graduation rates.
• Though it is too early to determine if TN-VPK will have such long-term effects, differences favoring TN-VPK participants have already been found on grade retention at the end of kindergarten and attendance during first grade.

• This study will continue to follow these children to assess a full range of outcomes as they progress through school.
Different expectations for TN-VPK

• There is no apparent consensus about what TN-VPK is expected to accomplish.
• If the expectation is that the economically disadvantaged children who attend TN-VPK will enter kindergarten better prepared, this research shows that TN-VPK fulfills that expectation.
• TN-VPK children gained more on early achievement measures during the pre-k year than children who did not attend and were rated as better prepared by their kindergarten teachers.
• If the expectation is that one year of TN-VPK will make these children perform better throughout their school careers, it is too early to tell how effective the program is.

• Though the early achievement measures show diminished effects, we do not yet know
  – how these children will perform on the state achievement tests in third grade or
  – the long-term effects on other aspects of school performance, early indications of which have already appeared.
Continuity between pre-k, kindergarten, and beyond

- Kindergarten and later classrooms that include TN-VPK children also have disadvantaged children who have not attended TN-VPK.
- This research has not examined these classrooms so we do not know how teachers handle this diversity—in particular, whether they
  - attempt to build on the gains the TN-VPK children have made or
  - repeat much of the instruction those children have already received.
Guidance for improving the quality of the TN-VPK program

- Children’s achievement gains depend on the quality of the TN-VPK program.

- In this study, observations and interviews have been conducted for 160 representative TN-VPK classrooms across the state.
Districts Involved in the RDD Classroom Observations
• The data so far reveal **great variation** in:
  – Teacher experience,
  – Time management,
  – Classroom environment,
  – Instructional interactions with students, and
  – Support and management across systems

• When these data are complete, they will help
  – Identify the characteristics of classrooms and structural factors of support that affect gain.
  – Provide guidance for program improvement.
Reports on the end of pre-k, and end of kindergarten and first grade outcomes can be found at:

https://my.vanderbilt.edu/tnprekevaluation/reports
Thanks!

Questions & Comments