

Effects of Pre-Kindergarten on Emergent Literacy in Kindergarten

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The DELL-D Project: Developing Early Language & Literacy in Danville

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About Danville



- Population of 33,000 (2005)
- County seat of Vermilion County, population 84,000
- Old fur-trading road between Lake Michigan and the south
- Irish and Eastern European immigrants, as well as African-Americans, came in the late 1800s to work in the mines.
- With the coming of large GM plant, it became a vibrant blue-collar community.
- With the closure of GM in the 1990s, Danville and Vermilion County went into an economic slide.
- County poverty rate of 14% compares to 11% rate in Illinois (2002)
- 19% child poverty rate compares to 15% rate in Illinois (2002)

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DELL-D Partners

- Developing Early Language and Literacy in Danville
 - University of Illinois Urbana-Champaign
 - Danville District 118 Pre-Kindergarten Program
 - Head Start Program at East Central Illinois Community Action Program
 - Danville Area Community College, Child Care
 - Center for Children's Services, Early Learning Center

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DELL-D Classrooms

- 5 separate locations across 4 programs
- 12 teaching teams (25 teachers)
- 12 classrooms
 - 8 full-day
 - 4 half-day
- 16 groups of children



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Child Demographics

- 80% from low income families
- 47% African-American, 35% Caucasian, 12% bi-racial, 5% Hispanic, 1% other
- 5% dual language learners
- 12% with IEPs for special education

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Teachers

- Wide range of teacher backgrounds
 - Teacher Certification - District teachers only
 - Education - High school to Master's degrees
 - Experience - First year teaching to over 20 years
 - Ethnicity - Caucasian & African-American

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DELL-D Highlights - The “Intervention”

- Emergent literacy curriculum - TROPHIES Curriculum
- Literacy-rich classroom environments - furnishings, teaching materials
- Screening & ongoing progress monitoring - multiple measures across the year (PPVT, PALS, IGDIs), use of data for planning
- Tiered system (RTI-“Response to Intervention”) - extra support to children with lowest scores on assessments
- Family involvement opportunities (events, within classrooms)
- Intensive, ongoing professional development - teacher institutes, monthly small group meetings, weekly coaching

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Kindergarten Follow-Up Study

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Statement of Problem

- Few studies have followed children from ERF into kindergarten or compared their outcomes to children receiving other public preschool programs or no preschool.

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Research Questions

- **Is type of Pre-K experience related to emergent literacy scores in Kindergarten, and in which areas of literacy?**
- **Do comparisons across groups of children with different Pre-K experience differ across the Kindergarten year?**

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Sample for Follow-Up Analysis

- Included all low-income Kindergarten children with parental permission (70%) from the city school district
 - Included only low-income children because they were the primary focus of the ERF project
- Categorized as entering from:
 - DELL-D classrooms (ERF project)
 - Other Pre-K sites (state-funded pre-K in district), Head Start
 - No known preschool program (did not attend any of the above)
- Excluded children with IEPs from these analyses because there were none in the “no preschool” group and few in the “other preschool” group

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Table 1 – Sample Characteristics

Percent Characteristic by Group		DELL-D (n=52)	Other P-K (n=110)	No P-K (n=103)	Total Sample (total n=265)
Gender	Male	.44	.43	.62	.51
Ethnicity	Caucasian	.15	.34	.46	.35
	African-American	.67	.53	.37	.49
	Bi-Racial	.10	.06	.09	.08
	Hispanic	.08	.07	.07	.07
	Asian	.00	.00	.02	.01
Months Age at Entry	Mean (standard deviation)	66.81 (3.58)	66.63 (3.76)	69.69 (6.01)	67.85 (4.94)

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Data Collection

- DIBELS data available from school district's Kindergarten assessments in Fall, Winter, and Spring (“Dynamic Indicators of Basic Early Literacy Skills”)
- Testing by district testing team (retired teachers, trained by district)

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Results

- **Analyses**
 - 3-way ANOVA (SPSS) across groups, with post-hoc between groups
 - Graphs of average percentile scores for each group in fall, winter, and spring
- **Measures:**
 - LNF = letter naming fluency
 - ISF = initial sound fluency
 - WUF = word use fluency
 - PSF = phoneme segmentation fluency
 - NWF = nonsense word fluency
- **Post-hoc:**
 - a = DELL-D vs. Other Pre-K
 - b = DELL-D vs. None
 - c = Other Pre-K vs. None

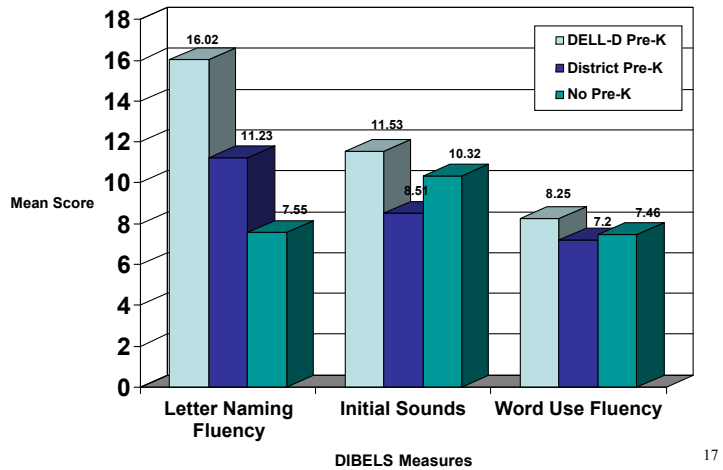
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Table 2 – FALL Mean Scores on DIBELS

DIBELS Measure by Group		DELL-D Pre-K n=52		District Pre-K n=110		No Pre-K n=102		ANOVA Results	
		Mean	s.d.	Mean	s.d.	Mean	s.d.	F	p value
Fall	LNF	16.02	11.32	11.23	10.30	7.55	10.05	12.475	.000 (a, b)
	ISF	11.53	7.52	8.51	7.52	10.32	7.93	2.285	.06
	WUF	8.25	9.86	7.20	9.86	7.46	9.94	.20	.82

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Fall Mean Scores on DIBELS



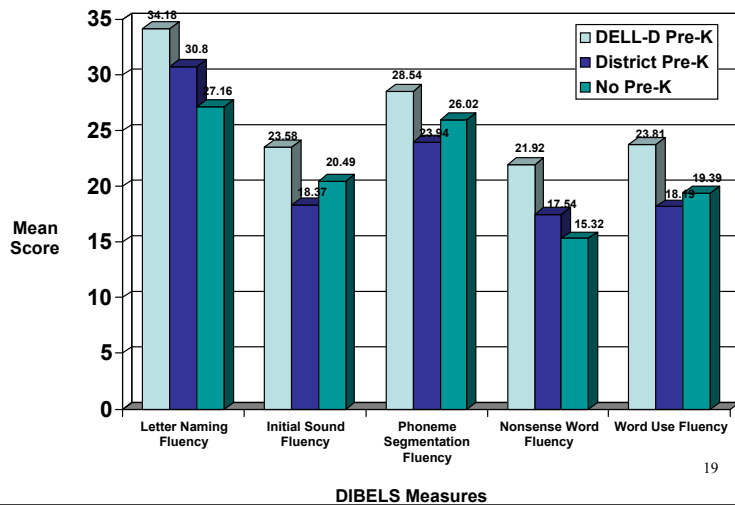
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Table 3 – WINTER Mean Scores on DIBELS

DIBELS Measure by Group	DELL-D Pre-K n=52		District Pre-K n=110		No Pre-K n=102		ANOVA Results	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	F	p value
Winter LNF	34.18	13.02	30.80	15.39	27.16	15.39	6.029	.003 (a,b)
ISF	23.58	11.83	18.37	9.60	20.49	13.08	3.671	.03 (b)
PSF	28.54	16.82	23.94	15.71	26.02	17.29	1.170	.25
NWF	21.92	13.49	17.54	13.14	15.32	12.89	5.215	.01 (a, b)
WUF	23.81	19.03	18.19	17.80	19.39	16.21	1.864	.16

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Winter Mean Scores on DIBELS



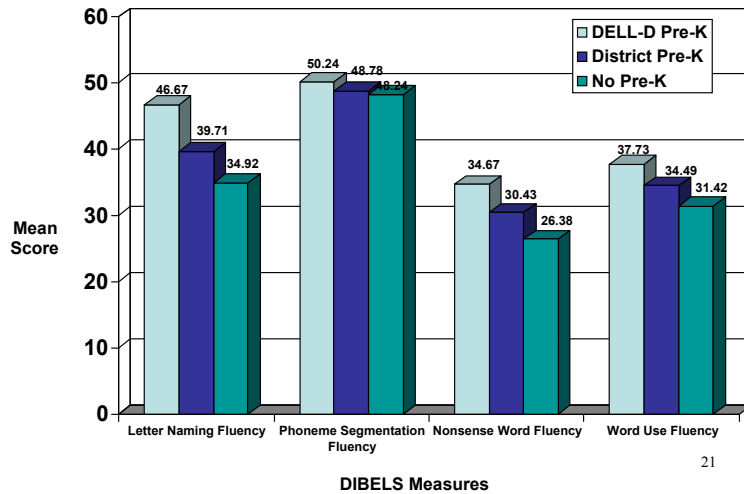
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Table 4 – SPRING Mean Scores on DIBELS

DIBELS Measure by Group	DELL-D Pre-K n=52		District Pre-K n=110		No Pre-K n=102		ANOVA Results	
	Mean	s.d.	Mean	s.d.	Mean	s.d.	F	p value
Spring LNF	46.67	13.16	39.71	15.69	34.92	14.69	10.183	.000 (a, b)
PSF	50.24	12.65	48.78	14.55	48.24	15.32	.314	.73
NWF	34.67	16.08	30.43	19.02	26.38	17.92	3.510	.03 (b)
WUF	37.73	16.92	34.49	17.34	31.42	17.14	2.247	.11

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Spring Mean Scores on DIBELS



Summary: Results for Mean Scores

- DELL-D scores were higher for all subtests across all measurement periods
 - 6/12 differences were significant differences
- “Other Pre-K” scores were higher for 7/12 measures than those of children with no Pre-K experience
 - none of these differences were significant

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Implications for Policy and Practice

- A direct focus on emergent literacy in Pre-K appears to make a difference for building a foundation for later literacy learning, over and above a more general early childhood curriculum
- A direct focus on emergent literacy in Pre-K affects how children enter and leave Kindergarten

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Contact Information



The DELL-D Project
 (Developing Early Language and Literacy in Danville)
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