

Report of the
Optional Extended-Day Kindergarten Program
for the 2009-10 School Year

Utah Code 53A-1a-902; Enrolled S.B. 49, 2007; Board Rule R277-489.

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Summary

Optional Extended-Day Kindergarten benefits students above and beyond non-Optional Extended-Day kindergarten. While OEK students began the 2009-10 school year with significantly lower scores than non-OEK students, by the end of the year OEK students had closed this achievement gap and scored similarly to non-OEK students. In some cases OEK students surpassed the achievement of non-OEK students at the end of the year. Thus, this report shows that the program benefits at-risk students.

Quick Facts

- Approximately 18% of kindergarten students participated in an extended kindergarten program in 2009-10. Of those students:
 - 64% were from families who qualify for free or reduced-price lunch.
 - 31% were learning English as a second language (ELL).
 - 12% were students with disabilities (SWD).
 - 43% identified their race/ethnicity as other than White.
- OEK classrooms gained an average of 54 percentage points over the year; non-OEK classrooms gained an average of 36 percentage points.
- Significantly fewer OEK students were at risk for falling behind in reading at the end of the year than at the beginning of the year (35% to 13%).
- A higher percentage of OEK students are able to move up from being at risk compared to non-OEK students (22% compared to 2%).
- In some districts, OEK classrooms even surpassed the achievement of non-OEK classrooms at the end of the year.
- This report finds similar outcomes to the 2009 report on OEK student achievement. Both reports conclude that while OEK students begin the year behind non-OEK students, by the end of the year this gap is closed or surpassed.

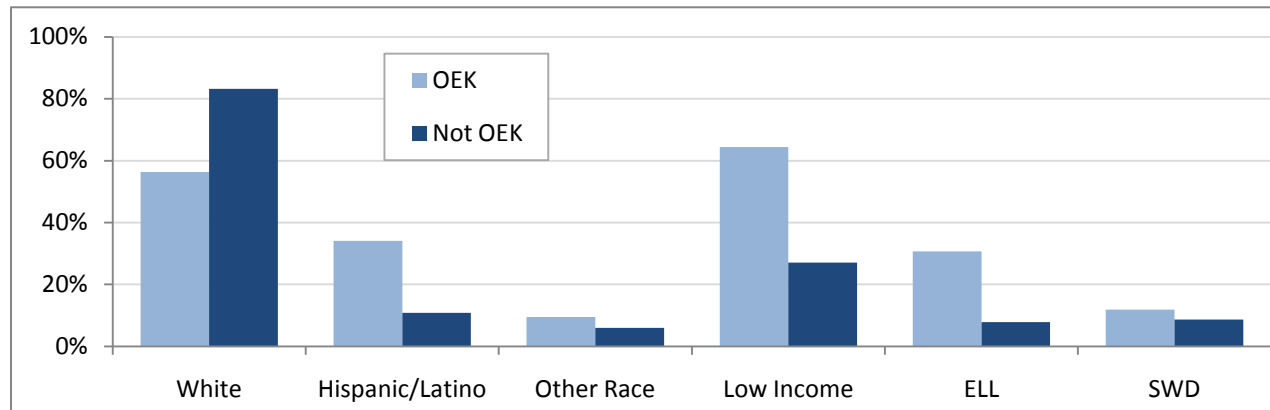
Technical Report

Program Participation

During the 2009-10 school year, districts and charter schools (LEAs) reported serving 8,106 students in approximately 346 classrooms using OEK funds. This represents approximately 18% of all kindergarten students in the state.

LEAs selected schools with the highest percentage of students who qualify for free or reduced-price lunch (low income) for the Optional Extended-Day Kindergarten (OEK) program. In fact, there are strong correlations between students' OEK participation and their status as low-income students, English language learners (ELL), and students who identified their race/ethnicity as other than White.

Figure 1: Student Demographics by Kindergarten Type



Students are selected for participation in OEK Programs through LEA screening assessments given either at the time of the spring kindergarten roundup or in the first five days of the school year. Once students are identified, their parents are notified by letter or by school staff members meeting with the parents individually. Few parents chose not to have their child participate in the OEK Program; 98% of LEAs reported a 95% or higher participation rate. In fact, in 2009, many schools with OEK programs noted that the biggest problem they faced was that more students wanted to participate than they could accommodate, and the schools had to turn students away.

OEK Achievement Measures

This analysis uses two types of data on student achievement in kindergarten. Twenty-two schools reported data using the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). DIBELS measures the five “Big Ideas” in early literacy identified by the National Reading Panel: phoneme segmentation fluency (PSF), letter naming fluency (LNF), initial sounds fluency (ISF), nonsense word fluency (NWF), and word use fluency (WUF). This analysis uses the LNF and PSF subtests since they have the highest predictive correlations to reading levels at the end of first grade. LNF is administered three times a year,

at the beginning, middle, and end of the year; PSF is only administered twice a year, at the middle and end of the year.

Twenty-three schools reported student achievement results based on locally developed tests. These tests differ from district to district, making standardization of scores an issue. Therefore, a percentage correct score was used to assess the impact of OEK on students taking a locally developed assessment.

Locally Developed Kindergarten Assessments

As shown in Table 1, the gap in achievement between OEK and non-OEK classrooms at the beginning of the year was significant. OEK classrooms performed at a level well below non-OEK classrooms. However, by the end of the year this gap in achievement disappeared.

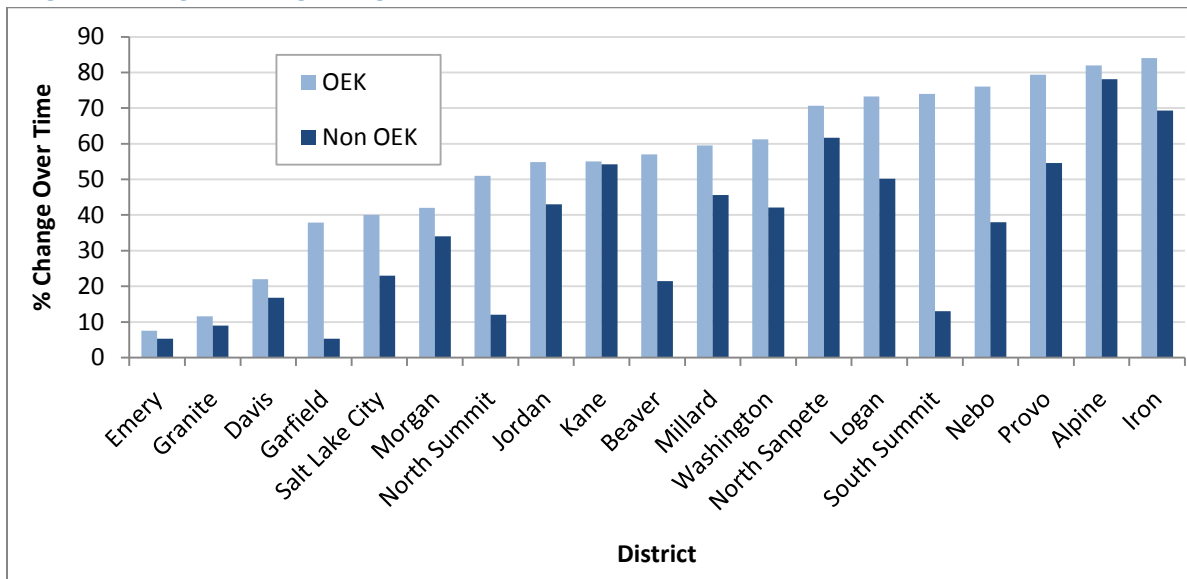
Table 1: Pretest and Post-test Average Percentage Correct, OEK v. Non-OEK

Average % Correct	Program Type		% Difference
	OEK Classrooms	Non-OEK Classrooms	
Pretest	28%	49%	21%*
Post-test	81%	83%	2%

* Statistically significant at the $p < 0.001$ level

Furthermore, students in OEK classrooms had higher gains across the year than their non-OEK counterparts. This relationship is shown in Figure 2.

Figure 2: Average Percentage Change Over Time in OEK v. Non-OEK Classrooms



In all cases, OEK classrooms made greater gains across the year than non-OEK classrooms. In some cases, the greater gain in average percentage correct could be due to ceiling effects. For instance, non-OEK students in North Summit District averaged 84 percent correct at the beginning of the year, leaving them only 16 percentage points to gain compared to the possible 57 percentage points that could be

gained by OEK students. In this case, the above graphic could be misleading. In other cases, such as that of South Summit District, non-OEK students did not score as highly at the beginning of the year, and by the end of the year OEK students had surpassed them in terms of average percentage correct.

DIBELS Kindergarten Assessments

Letter Naming Fluency (LNF)

Table 2 displays the percentage of students in either OEK or non-OEK classrooms in each of the three fluency categories for the LNF subtest. As shown, a greater percentage of students in OEK classrooms (35%) were considered at risk for reading fluency problems as compared to non-OEK students (14%). Furthermore, a much smaller percentage of students in OEK classrooms fell into the Low Risk category to begin the year. Both of these comparisons represent statistically significant values, suggesting that the gap in DIBELS achievement scores between the two types of classrooms was substantial at the beginning of the school year.

Table 2: Percentage of Students in Each Risk Category Over Time, OEK v. Non-OEK

	At Risk			Some Risk			Low Risk		
	OEK	Non-OEK	% Diff	OEK	Non-OEK	% Diff	OEK	Non-OEK	% Diff
Beginning	35%	14%	-21%**	22%	18%	-4%**	42%	67%	25%**
Middle	15%	10%	-5%	19%	15%	-4%*	66%	75%	9%*
End	13%	12%	-1%	19%	18%	-1%	67%	70%	3%

* Statistically significant at the $p < 0.05$ level

** Statistically significant at the $p < 0.001$ level

By the end of the school year, this gap had disappeared. None of the differences between OEK and non-OEK at the end of year are statistically significant. Another way to look at LNF achievement between the two groups is seen when considering the percentage of change between categories from the beginning of the year for OEK students as compared to non-OEK students. Figure 3 shows this relationship.

Figure 3: Percentage of Students Moving From One LNF Category to Another Over Time, OEK v. Non-OEK

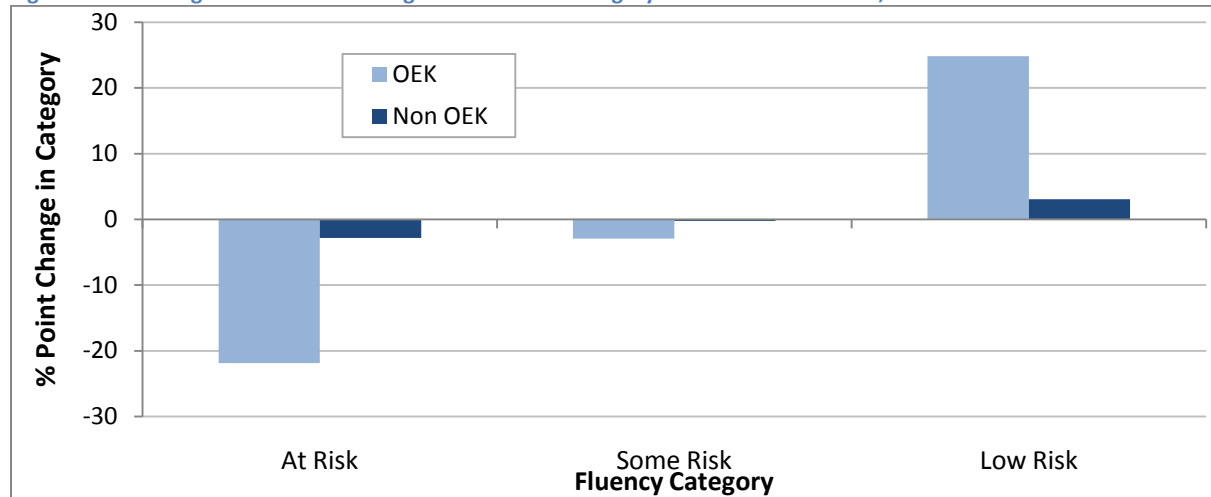


Figure 3 represents the number of students who moved from one category to another over the year. It shows that there was greater movement from the lower categories to the higher categories among OEK students compared to non-OEK students. For example, 35% of OEK students began the year in the At Risk category, but by year end only 13% were At Risk. This represents a 22%-point difference. By comparison, the At Risk category for non-OEK students saw only a 3%-point decrease (14.5% to 11.6%). While non-OEK classrooms began the year with a higher percentage of students in the Low Risk category, the Low Risk category growth for OEK students was larger than for non-OEK students. By the end of the school year, the high risk OEK students were statistically the same as the non-OEK students.

Phoneme Segmentation Fluency (PSF)

The PSF subtest is only administered twice a year in kindergarten, at the middle and end of the year. Since presumably growth would have already occurred between the beginning of the year and the middle of the year, the results are not as dramatic as with LNF. The gap at the middle between OEK and non-OEK students is not as great as it is at the beginning of the year. Despite this, PSF results suggest that OEK leads to strong academic gains in reading. At mid-year, significantly more non-OEK students were categorized as Low Risk than OEK students in that category. By the end of the year, OEK and non-OEK students categorized as Low Risk were statistically the same.

Table 3: Percent Students in Each Risk Category Over Time, OEK v. Non-OEK

	At Risk			Some Risk			Low Risk		
	OEK	Non-OEK	% Diff	OEK	Non-OEK	% Diff	OEK	Non-OEK	% Diff
Middle	16%	9%	-7%	20%	16%	-4%*	65%	76%	11%**
End	5%	3%	-2%	13%	10%	-3%	82%	86%	4%

*Statistically significant at the $p < 0.05$ level

**Statistically significant at the $p < 0.01$ level

As with LNF scores, the amount of change within a category was greater for OEK classrooms than for non-OEK classrooms. In other words, more OEK students were able to move from the At Risk category to one of the other two fluency categories compared to non-OEK students. Figure 4 graphically displays this relationship.

Figure 4: Percentage of Students Moving From One Category to Another Over Time, OEK v. Non-OEK

