

DOLLY PARTON'S IMAGINATION LIBRARY AND ELEMENTARY ACADEMIC SUCCESS IN ARKANSAS



ABSTRACT

This report finds that participation in Dolly Parton's Imagination Library (DPIL) has a number of short term and sustained benefits for students, regardless of family income level. DPIL participation was associated with lower retention rates in kindergarten, 3rd grade, and at any point from kindergarten through 3rd grade. Participants in DPIL also showed statistically significant advantages on measures of elementary academic success including the Qualls and ACT Aspire proficiency tests.

AUTHORS

Jake Walker, PhD, Principal Investigator
Greg Holland, PhD, Director
Ellie Wheeler Hill, MA, Project Director
Arkansas Research Center
University of Central Arkansas
Offices in Little Rock and Conway

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Executive Summary

This report analyzes the impact of participation in the Dolly Parton Imagination Library (DPIL) program on academic outcomes in Arkansas. The analysis focuses on kindergarteners who entered school for the first time between the academic years of 2013 to 2019. Data on program participation rates was provided by the Arkansas DPIL program. Educational assessment data was provided by the Arkansas Department of Education (ADE) and includes the Qualls Early Learning Inventory and the ACT Aspire. ADE also provided data on student retention rates and other demographic variables.

DPIL participation rates varied from year to year. Overall, about 7% of kindergarten students in this study participated in DPIL. In general, DPIL participants are more likely to be from White, non-Hispanic, English-speaking families, with incomes above 185% of the poverty line.

Participants in Dolly Parton's Imagination Library (DPIL) showed statistically significant advantages on measures of elementary academic success including the Qualls and ACT Aspire proficiency tests. DPIL participants were shown to perform better on these assessments even when controlling for other variables like family income and race and ethnicity. While DPIL participation was associated with improved academic outcomes for all economic groups, the impact was strongest for students from the most economically distressed groups (Direct Certification & Free Meal).

DPIL participation was associated with lower retention rates in kindergarten, 3rd grade, and at any point from kindergarten through 3rd grade. The odds of being retained at any point from kindergarten to 3rd grade are significantly higher for non-DPIL participants, holding all else constant.

This report finds that participation in DPIL has a number of statistically significant, short term and sustained benefits for students, regardless of family income level.

Comparing DPIL and Non-DPIL Kindergarten Student Populations

Key Takeaways

- DPIL participation rates varied from year to year. Overall, about 7% of kindergarten students in this study participated in DPIL.
- In general, DPIL participants are more likely to be from White, non-Hispanic, English-speaking families, with incomes above 185% of the poverty line.
- DPIL participants are slightly more likely to have a special education designation in kindergarten compared students who do not participate.

DPIL is available to all families with children in Arkansas, with no means tested requirements. Despite being available to everyone, the families who elect to participate in DPIL differ from non DPIL participants. It is important to identify those differences before analyzing the impact of DPIL participation so that we can control for their impact.

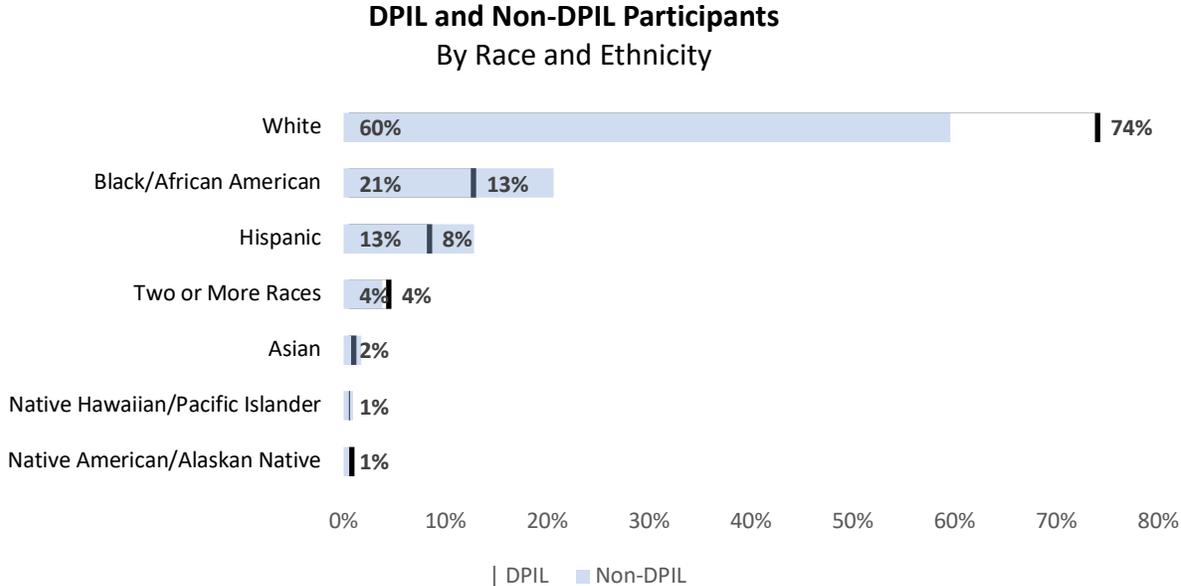
General

Of students who entered kindergarten for the first time between academic year 2013 and 2019, there were 267,345 total students, 248,666 non-DPIL and 18,679 DPIL students. Overall, approximately 7% participated in DPIL, although participation rates varied from year to year.

Race and Ethnicity

DPIL students are disproportionately White compared to non-DPIL students (Figure 1). Almost three quarters of students who participated in DPIL were White (74%). A smaller share of non-DPIL participants were White (60%). Conversely, about a quarter of students who participated in DPIL were non-white (26%) compared to non-DPIL participants (who were 40% non-white).

Figure 1.



Income (meal status)

Because school meal status is means tested, it can be used as a proxy for household income. See Figure 2 below for the relationship between meal status and income.

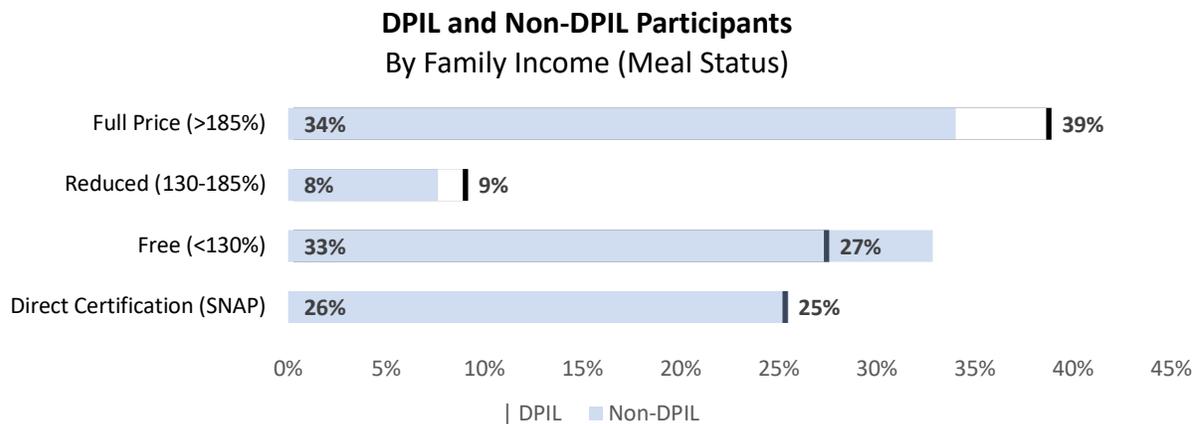
Figure 2.



Students who had a full price lunch designation, indicating a household income above 185% of the poverty line, made up a larger share of DPIL participants (39%) than non-DPIL participants (34%). This tells us that higher income students are disproportionately represented in the population of DPIL participants.

Conversely, free lunch students (below 130% of the poverty line) made up a relatively small share of DPIL participants (27%) as seen in Figure 3. Again, this indicates that lower income students are participating in DPIL at the same rate as higher income students. A similar proportion of DPIL and non-DPIL students were direct certified (26% non-DPIL, 25% DPIL) or had reduced meal status (8% non-DPIL, 9% DPIL).

Figure 3.



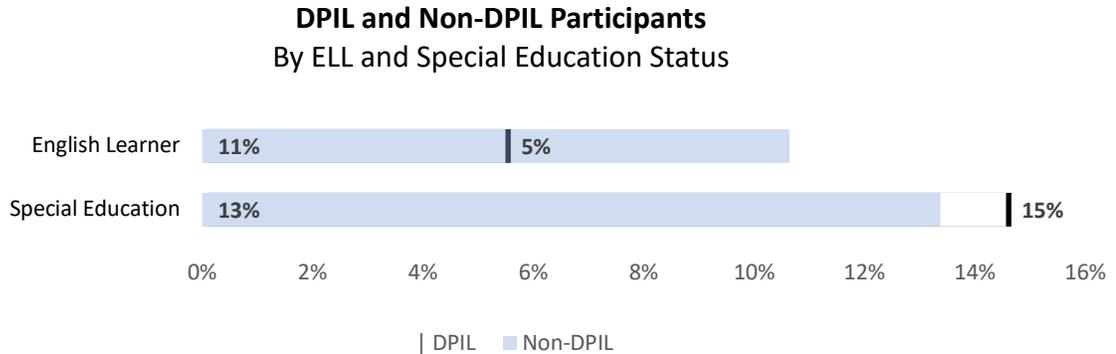
Learning

Special education students are more represented in the DPIL population, especially among lower income students (Figure 4). There are slightly more special education students in the DPIL population (15%) compared to the non-DPIL population (13%). This difference is larger for low-income students. Direct certified students with special education status were more likely to participate in DPIL (16% non-DPIL, 18% DPIL) compared to those with full price meal status where participation was equally likely (10% non-DPIL, 10% DPIL).

English Language Learner (ELL) students, however, were less represented in the DPIL population (11% non-DPIL, 5% DPIL). ELL student participation in DPIL also varied by income group. The largest

proportion of ELL was seen for the free meal group (17% non-DPIL, 12% DPIL). ELL students were less represented in the Direct Certification group (10% non-DPIL, 5% DPIL). A possible explanation for this is that direct certification happens through an automatic statewide administrative data match to SNAP participants, while free meal status is accomplished via a paper application at the school. If foreign language speaking adults tend to make less use of SNAP, it would be reasonable to see this difference in direct certification for meal status for their children.

Figure 4.



Mobility

Mobility is measured as the number of schools a student was present in during the academic year. Both non-DPIL and DPIL groups had almost identical mobility counts. Both groups had about 10% of their students in more than one school during the year. However, lower income students are more likely to be mobile. Approximately 14% of Direct Certification students attended more than one school, while approximately 5% of full price students attended more than one school.

Qualls Early Learning Inventory

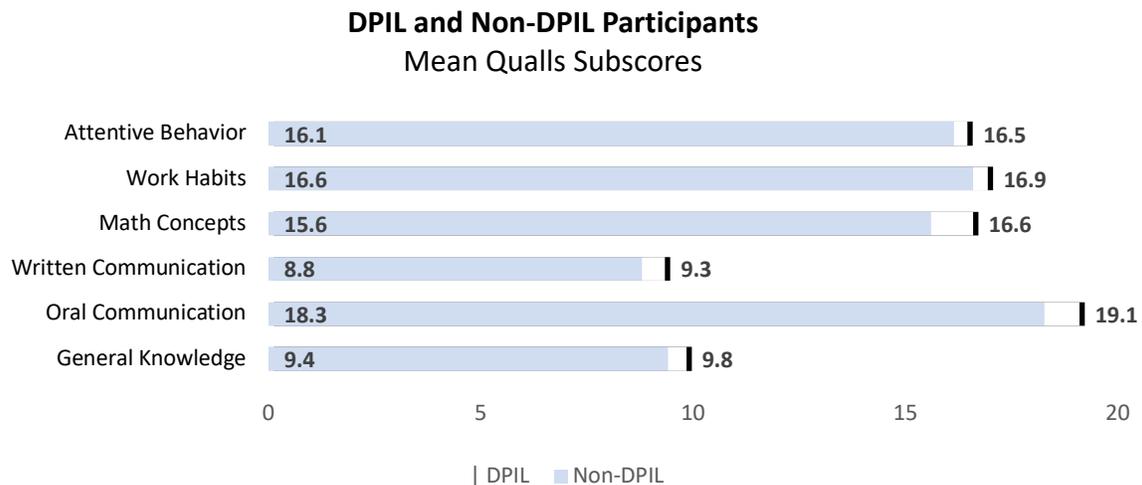
Key Takeaways

- DPIL students had higher average scores on all sections of the Qualls compared to non-DPIL students.
- DPIL participation was associated with score increases of 2% to 6% on average depending on the assessment area.
- Within each meal status type, DPIL students out-performed non-DPIL students for nearly every Qualls subsection. The exceptions were for Reduced Meal Status on the Work Habits and Attentive Behavior assessments.
- The apparent positive effect of DPIL participation on academic success on the Qualls was greatest for the lowest income groups.

The Qualls Early Learning Inventory is a Kindergarten academic assessment tool. The analysis focuses on kindergarteners who entered school for the first time between the academic years of 2013 to 2017. Data from each of the six Qualls subsections were used to compare the early academic success of DPIL and non-DPIL participants.

In general, DPIL participants did better on this assessment. The average score of DPIL participants was higher than non-DPIL on all sections of the Qualls (Figure 5). The largest gains were in Math Concepts and Written Communications, where DPIL students showed approximately a 6% gain over non-DPIL participants for both subsections.

Figure 5.



We know that academic outcomes are influenced by many factors including family income. To help isolate the impact of DPIL participation, the Qualls assessment data was also broken down by income group (using meal status as a proxy). Because meal status is linked to household income, we can use this designation to create household income groups for analysis.

Qualls Early Learning Inventory

The Qualls Early Learning Inventory is a Kindergarten academic assessment tool. The Qualls has six subsections with differing score ranges.

- 1. General Knowledge**
(Scored 0 to 13)
- 2. Oral Communication**
(Scored 0 to 24)
- 3. Written Communication**
(Scored 0 to 20)
- 4. Math**
(Scored 0 to 25)
- 5. Work Habits**
(Scored 0 to 21)
- 6. Attentive Behavior**
(Scored 0 to 21)

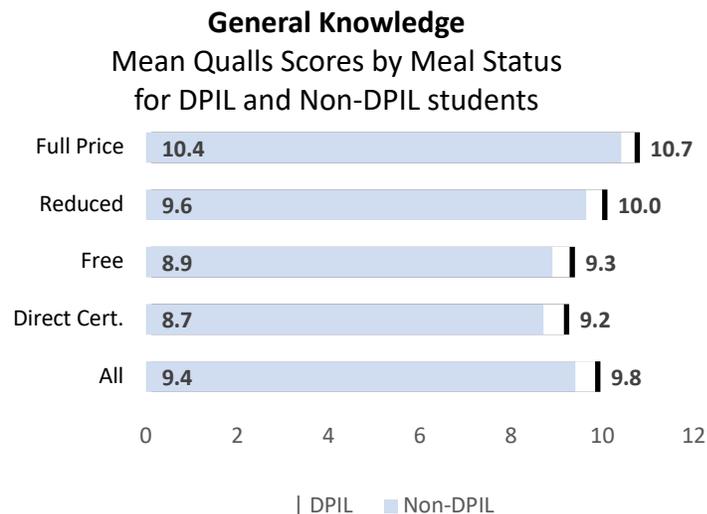
The study found that, as expected, students in lower-income groups had lower Qualls scores. This is true for DPIL and non-DPIL students alike. However, DPIL participants outperformed non-DPIL students within each income group in nearly all of the Qualls categories. In other words, low household income hurts academic outcomes, and DPIL participation appears to insulate students from some of those harmful effects.

Furthermore, the gap in Qualls scores between DPIL and non-DPIL students was largest for students living below 130% of the poverty line (direct certification and free meal status). This suggests that DPIL has the biggest impact on very low-income students.

General Knowledge

Among all income groups, DPIL participants scored 4.6% higher on the General Knowledge subsection of the Qualls compared to non-DPIL students (Figure 6). Full price students had the smallest advantage from DPIL participation in this subsection (scores up by .29 points or 2.8%) and direct certification students had the largest percent gain (scores up by .44 points or 5.1%).

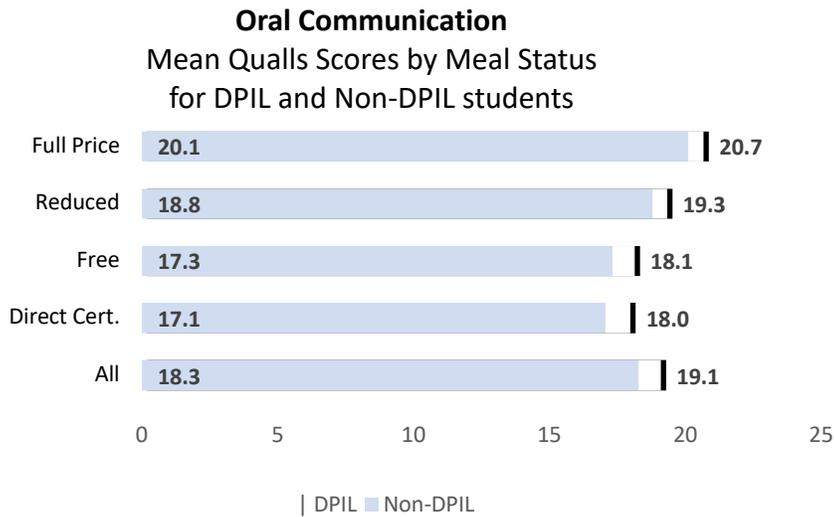
Figure 6.



Oral Communication

Among all income groups, DPIL participants scored 4.5% higher on the Oral Communication subsection of the Qualls compared to non-DPIL students (Figure 7). Again, full price students had the smallest advantage from DPIL participation in this subsection (scores up by .57 points or 2.8%) and direct certification students had the largest percent gains (scores up by .93 points or 5.4%).

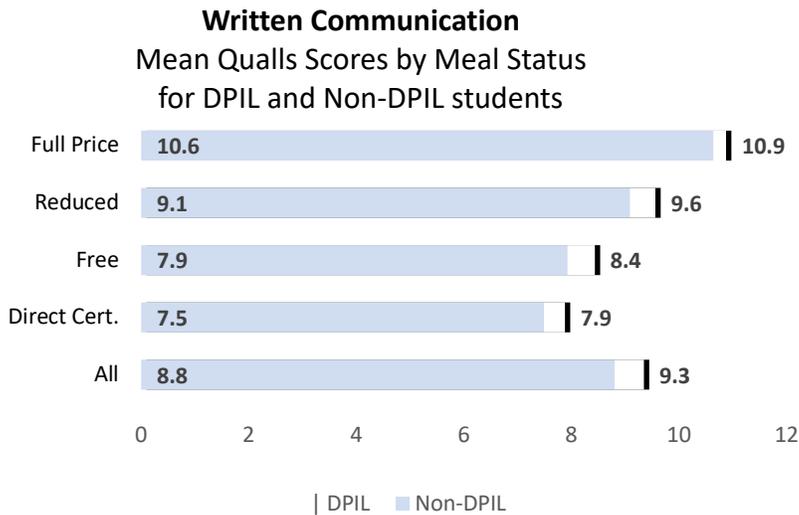
Figure 7.



Written Communication

Among all income groups, DPIL participants scored 6.1% higher on the Written Communication subsection of the Qualls compared to non-DPIL students (Figure 8). Full price students had the smallest advantage from DPIL participation in this subsection (scores up by .24 points or 2.2%) and free lunch students had the largest percent gain (scores up by .50 points or 6.3%).

Figure 8.

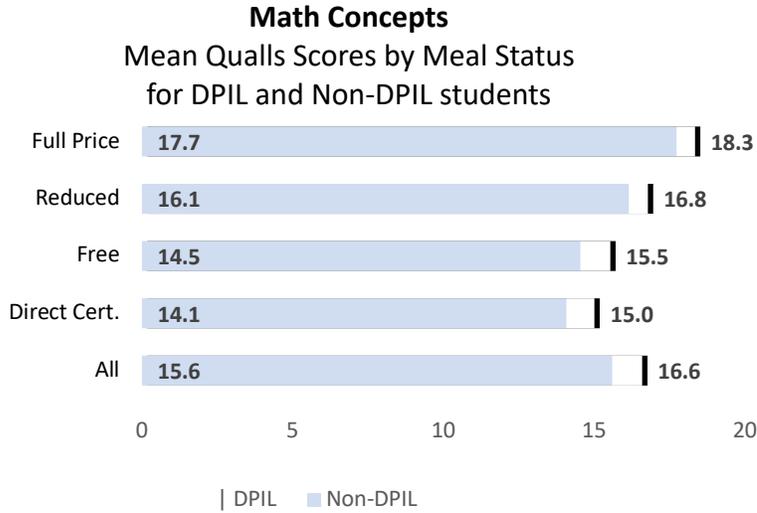


Math Concepts

Among all income groups, DPIL participants scored 6.3% higher on the Math Concepts subsection of the Qualls compared to non-DPIL students (Figure 9). Similar to previous sections, full price students had the

smallest advantage from DPIL participation in this subsection (scores up by .62 points or 3.5%). Free lunch and direct certification students had the largest percent gain (6.8% and 6.7% respectively).

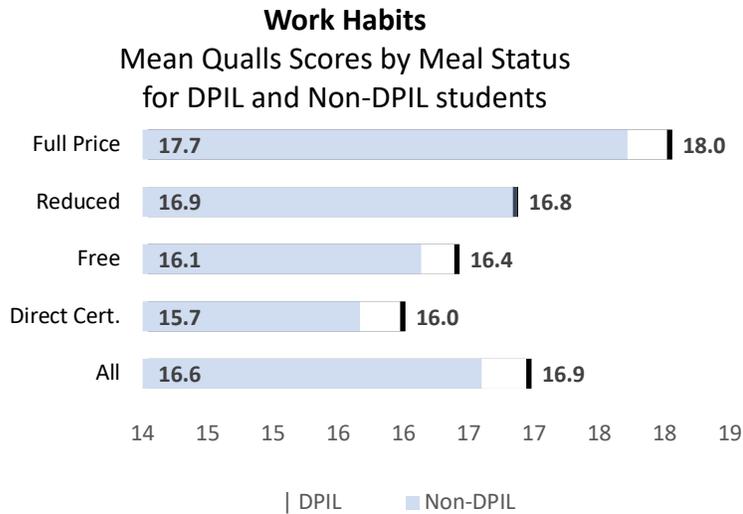
Figure 9.



Work Habits

Among all income groups, DPIL participants scored 2.1% higher on the Work Habits subsection of the Qualls compared to non-DPIL students (Figure 10). Reduced-price meal students who participated in DPIL showed a slightly lower Qualls score in this subsection (scores down by -.03 points or -0.2%). Direct certification students showed the largest percent gain (scores up by .31 points or 2.0%).

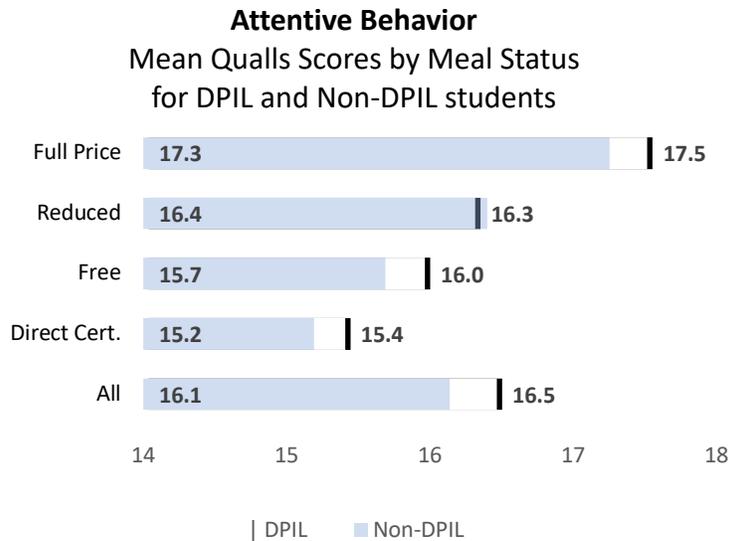
Figure 10.



Attentive Behavior

Among all income groups, DPIL participants scored 2.0% higher on the Attentive Behavior subsection of the Qualls compared to non-DPIL students (Figure 11). Similar to the Work Habits subsection, reduced-price meal students who participated in DPIL showed a slightly lower Qualls score in this subsection (scores down by .09 points or -0.5%). Free meals status students showed the largest percent gain (scores up by .28 points or 1.8%).

Figure 11.



ACT Aspire Proficiency

Key Takeaways

- DPIL students were more likely to score “proficient” on the ACT Aspire compared to non-DPIL students. This was true for all the assessment categories and for all meal status groups.
- The positive effect of DPIL participation on academic success on the ACT Aspire was greatest for the lowest income groups.

The ACT Aspire is a third-grade, end-of-year assessment. Students are categorized as “proficient” or “not proficient” in Reading and Language Arts, Mathematics, and Science based on this assessment. Like with the Qualls assessment, ACT Aspire scores are higher for DPIL students compared to non-DPIL students. This was true for all the assessment categories and for all meal status groups. These outcomes suggest that the positive impact of DPIL participation on academic outcomes is sustained through 3rd grade.

Also like the Qualls assessment, lower income students appear to gain the most from DPIL participation. Students with direct certification, free, and reduced meal status all saw greater increases in scores on average than those in the full price category, with slight variation seen in the areas of Work Habits and Attentive Behavior. So, while DPIL participation had a positive impact on all students’ scores no matter their economic standing, it was seen that a stronger positive relationship existed for those students typically most in need.

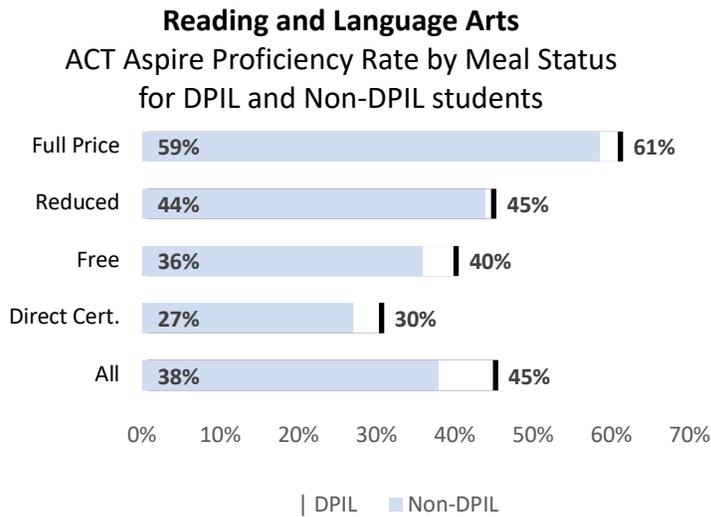
Reading and Language Arts

The DPIL group had a higher proficiency rate compared to the non-DPIL group overall On the Reading and Language Arts (RLA) assessment (45% proficiency compared to 38%). That difference represents an 18% boost in the average proficiency rate for the DPIL group (Figure 12).

The boost to proficiency associated with DPIL participation was also true for all meal status categories. The direct certification meal status group had the largest gap between DPIL and non-DPIL students. Among direct certification students, DPIL participants had a 12% higher average proficiency rate on the RLA section than non-DPIL students. Similarly, among free meal status students, DPIL participants had an 11% higher average proficiency rate on the RLA section compared to non-DPIL participants.

Reduced price and full price status students also appeared to benefit from DPIL participation, but to a lesser degree. DPIL participation was associated with a 2% increase in the average proficiency rate for reduced price status students and 4% for full price status students.

Figure 12.

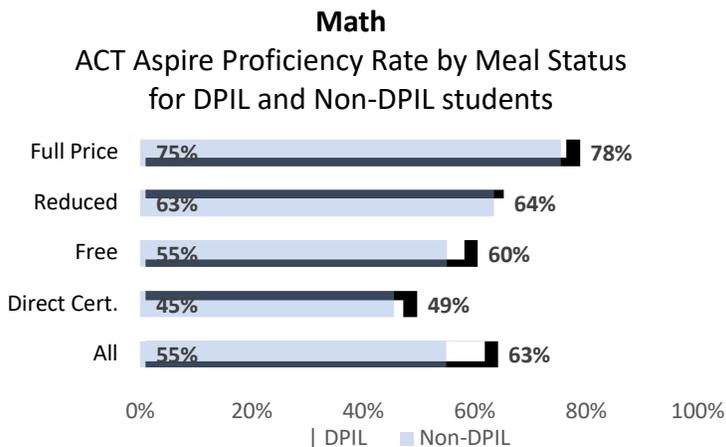


Mathematics

The DPIL group had a higher proficiency rate compared to the non-DPIL group overall on the Mathematics assessment (63% proficiency compared to 55%). That difference represents an 15% boost in the average proficiency rate for the DPIL group (Figure 13).

The boost to proficiency associated with DPIL participation was also true for all meal status categories. The free meal status group had the largest gap between DPIL and non-DPIL students. Among free meal status students, DPIL participants had an 8% higher average proficiency rate on the Math section than non-DPIL students. Similarly, among direct certification students, DPIL participants had a 7% higher average proficiency rate on the Math section compared to non-DPIL participants.

Figure 13.



Reduced price and full price status students also appeared to benefit from DPIL participation, but to a lesser degree. DPIL participation was associated with a 1% increase in the average proficiency rate for reduced price status students and a 3% increase for full price status students.

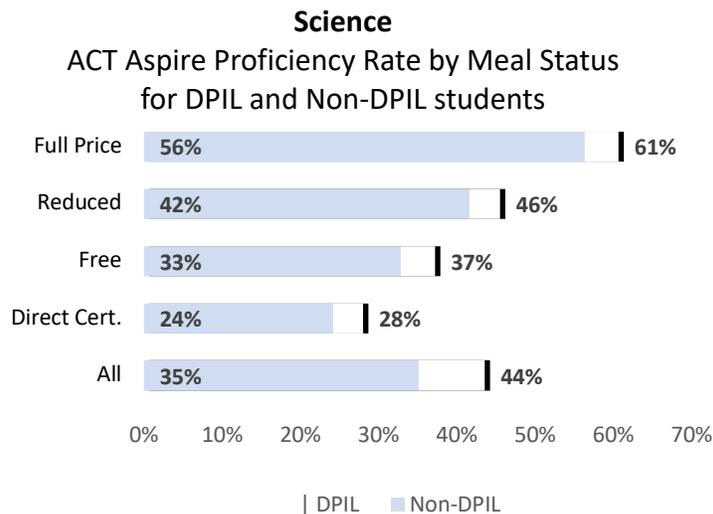
Science

The DPIL group had a higher proficiency rate compared to the non-DPIL group overall on the Science assessment (35% proficiency compared to 44%). That difference represents an 24% boost in the average proficiency rate for the DPIL group (Figure 14).

The boost to proficiency associated with DPIL participation was also true for all meal status categories. Among direct certification status students, DPIL participants had a 16% higher average proficiency rate on the Science section than non-DPIL students. Similarly, among free meal status students, DPIL participants had a 13% higher average proficiency rate on the Science section compared to non-DPIL participants.

Reduced price and full price status students also appeared to benefit from DPIL participation, but to a lesser degree. DPIL participation was associated with a 9% increase in the average proficiency rate for reduced price status students and an 8% increase for full price status students.

Figure 14.



Retention

Key Takeaways

- DPIL participation was associated with lower retention rates in kindergarten, 3rd grade, and at any point from kindergarten through 3rd grade.
- Kindergarteners who participated in DPIL were retained 24% less often than non-DPIL participants. The odds of being retained in kindergarten are 1.340 times higher for non-DPIL participants compared to DPIL participants, holding all else constant.
- 3rd graders who participated in DPIL were retained 28% less often than non-DPIL participants. The odds of being retained in 3rd grade are 1.39 times higher for non-DPIL participants compared to DPIL participants, holding all else constant.
- The rate of retention at any point between kindergarten and 3rd grade was 17% lower for DPIL compared to non-DPIL participants. The odds of being retained at any point from kindergarten to 3rd grade are 1.24 times higher for non-DPIL participants than DPIL participants, holding all else constant.

Participation in DPIL, in general, reduced retention rates for students in kindergarten, 3rd grade, and at any point in between. However, we know that many variables influence retention rates. To account for this, we included ELL status, SPED status, meal status (income), mobility, and Race and ethnicity in our model.

ELL status and full price meal status were both found to lower the odds of retention. Conversely, student mobility and special education status increased the odds of being retained. The odds of being retained were greatest for the most impoverished students; those classified as free and direct certification. Student race was also associated with different odds of retention in kindergarten, although the results were somewhat mixed among the kindergarten, 3rd grade and K-3 analysis groups.¹

The impact of DPIL on retention rates is still strong for the kindergarten, 3rd grade and K-3 analysis groups even when accounting for the other variables.² For non-DPIL participants compared to DPIL participants (holding all other variables constant) the odds of being retained are 1.34 times higher in kindergarten, 1.39 times higher in 3rd grade and 1.24 times higher from kindergarten to 3rd grade.

DPIL was also found to have a positive effect on retention among almost all meal status groups for kindergarten, 3rd grade, and the intervening years.

¹ **Kindergarten:** Compared to White students, Asian, Native American/Alaskan Natives, and Hawaiian Natives/Pacific Islanders were more likely to be retained while Black/African American students were less likely to be retained. No difference was seen for Hispanic or multiracial students.

3rd Grade: Compared to White students, Asian, and Native American/Alaskan Natives were more likely to be retained while Black/African American and Hispanic students were less likely to be retained while no difference was seen for Native Hawaiian/Pacific Islander or multiracial students.

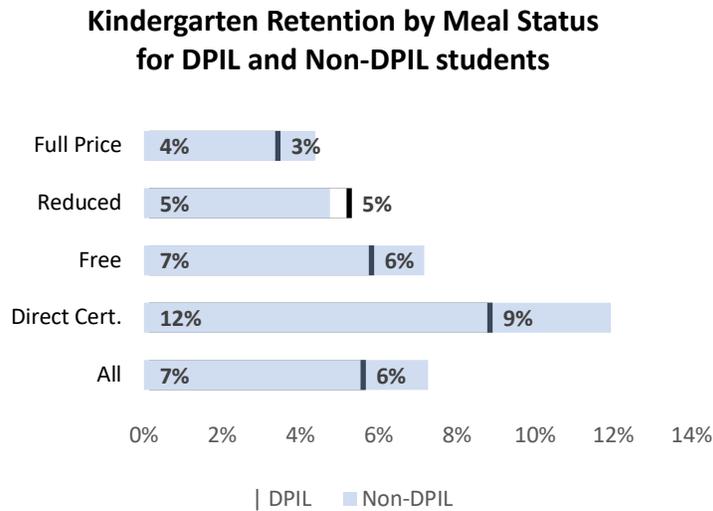
K-3: Compared to White students, Asian, Black/African American, and Hispanic students were less likely to be retained. No effect was seen for Native American/Alaskan Natives, and Hawaiian Natives/Pacific Islanders, or multiracial students.

² Special education status, ELL status, race and ethnicity, mobility, and income (meal status).

Kindergarten

On average, kindergarteners who participated in DPIL were retained 24% less often than non-DPIL participants (Figure 15). DPIL participation also had a positive effect on retention rates for all but one meal status group (reduced price). The largest difference in retention rates was for direct certification students, where DPIL students were retained 27% less often than the non-DPIL population. The reduced-price group saw slightly higher retention rates among DPIL participants (4.75% non-DPIL retained versus 5.17% DPIL retained).

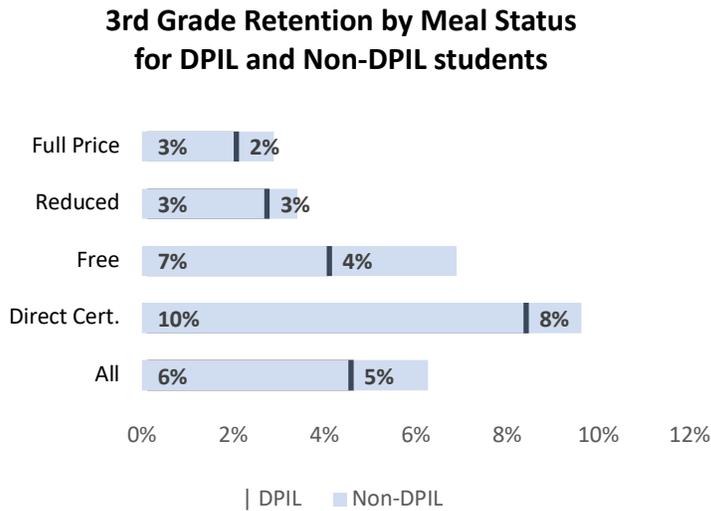
Figure 15.



3rd Grade

On average, 3rd graders who participated in DPIL were retained 28% less often than non-DPIL participants (Figure 16). DPIL participation also had a positive effect on retention rates for all meal status groups. The largest difference in retention rates was for free meal status students, where DPIL students were retained 41% less often than the non-DPIL population.

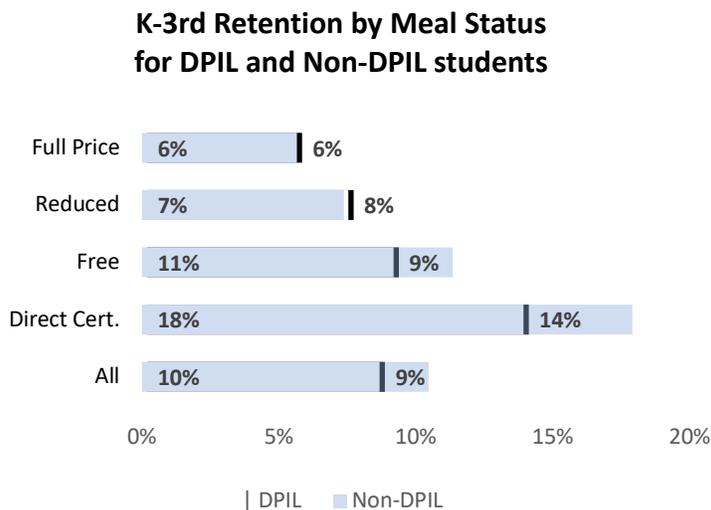
Figure 16.



Between Kindergarten and 3rd grade

On average, the rate of retention at any point between kindergarten and 3rd grade was 17% lower for DPIL participants compared to non-DPIL participants (Figure 17). DPIL participation also had a positive effect on retention rates for all but one meal status group (reduced price). The largest difference in retention rates was for direct certification students, where DPIL students were retained 22% less often than the non-DPIL population.

Figure 17.



Appendix A: Data Notes

Race and Ethnicity

For students who had multiple grade levels or race/ethnic classifications, the most frequently occurring was selected to represent that student, if there was a tie, the earliest occurring value was selected.

Meal Status

For student meal status, it was decided that the status related to the most impoverished level of poverty would be selected. By coding direct certified free=0, free=1, reduced=2, and full price=3, the lowest value a student had in a year was chosen as their meal status.

Historically, only three values were used for meal status: free, reduced, and full price. ADE partnered with Arkansas Department of Human Services to directly certify Supplemental Nutrition Assistance Program (SNAP) recipients as qualified for free meals, rather than completing the paperwork application required for free meal status. Students who are not directly certified for free meals may still complete the necessary paperwork to apply for free meals.

Learning

For Special Education and English Language Learner (ELL) status, it was decided that if a student was classified as either special education or ELL in a year, then they were coded as such for the analysis for that year.

Mobility

Three variables used to represent mobility were calculated for the number of schools a student attended. The first was the number of schools a student attend the first time they were in kindergarten. The second was the number of schools a student attending the first time they were in the 3rd grade. While the third was limited to students who were present in both kindergarten and 3rd grade in the data, this calculated the total number of schools a student attended between their first time in kindergarten and their first time in 3rd grade.

Retained in Kindergarten

For the analysis of students retained in kindergarten we looked at students who entered kindergarten between academic year 2013 and 2019. Academic year 2013 was chosen for this analysis for the same reason it was with the Qualls analysis. For this analysis there were 267,345 total students, 248,666 non-DPIL and 18,679 DPIL students representing 6.99% of the total.

Retained in 3rd Grade

Examining retention in the 3rd grade to keep with the same timeframe plus three years as used with the Qualls analysis we selected third-grade students who entered 3rd grade for the first time between academic years 2016 and 2019. For this analysis there were 157,813 total students with 150,462 non-DPIL and 7,387 DPIL students representing 4.68% of the total.

Retained Anytime Between Kindergarten and 3rd Grade

To analyze retention between kindergarten and 3rd grade, only students who were present in kindergarten between academic years 2013 and 2016 and were also present in the data between 2016-2020 were used. The academic year of the first time a student appeared in kindergarten was subtracted from the last academic year a student appeared in the 3rd grade and if that number was greater than

three that student was classified as retained at some point between kindergarten and 3rd grade. For this analysis there were 138,753 total students with 131,530 non-DPIL students and 7,223 DPIL students representing 5.21% of the total.

Appendix B: Data Tables

Table 1. DPIL Participation AY They Entered Kindergarten

AY	Non-DPIL	DPIL	Percent DPIL
2010	40,655	-	0.0%
2011	36,673	546	1.5%
2012	36,110	972	2.7%
2013	39,068	1,573	4.0%
2014	37,972	1,787	4.7%
2015	36,176	2,012	5.6%
2016	35,228	2,367	6.7%
2017	34,501	2,869	8.3%
2018	33,864	3,758	11.1%
2019	32,748	4,350	13.3%
2020	31,122	6,154	19.8%

Table 2. Descriptive Statistics for All Students and DPIL Students Who Entered Kindergarten between 2013-2017 and Took the Qualls

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	N=182,054	N=10,571	N=40,912	N=2,409	N=65,572	N=3,264	N=13,931	N=959	N=61,639	N=3,939
	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL
Percent of Students	94.19%	5.81%	94.12%	5.88%	95.02%	4.98%	93.12%	6.88%	93.61%	6.39%
Special Education in Kindergarten	12.72%	13.79%	15.56%	16.19%	13.63%	16.33%	13.79%	17.10%	9.53%	9.42%
English Learner in Kindergarten	10.19%	6.37%	10.10%	5.77%	16.54%	13.33%	9.96%	5.11%	3.10%	1.27%
Race/Ethnicity										
Asian	1.46%	0.89%	0.37%	0.37%	1.05%	1.01%	1.78%	1.15%	2.60%	1.01%
Black/African American	20.22%	13.08%	33.71%	26.09%	25.21%	16.34%	12.48%	8.59%	7.11%	3.45%
Hispanic	12.39%	9.24%	12.90%	9.55%	19.22%	17.38%	12.60%	8.02%	4.43%	2.70%
Native American/Alaskan Native	0.51%	0.57%	0.37%	0.37%	0.56%	0.38%	0.65%	1.26%	0.52%	0.66%
Native Hawaiian/Pacific Islander	0.79%	0.15%	1.14%	0.28%	1.17%	0.14%	0.46%	0.34%	0.22%	0.03%
White	60.95%	72.12%	46.84%	57.97%	48.91%	60.53%	68.51%	76.86%	82.35%	89.28%
Two or More Races	3.67%	3.95%	4.67%	5.38%	3.87%	4.23%	3.52%	3.78%	2.77%	2.87%
Meal Status in Kindergarten										
Direct Certification (SNAP)	22.47%	22.79%								
Free (<130%)	36.02%	30.88%								
Reduced (130-185%)	7.65%	9.07%								
Full Price (>185%)	33.86%	37.26%								
Mobility in Kindergarten										
1 School	90.36%	90.16%	86.17%	85.54%	88.47%	88.14%	93.27%	92.78%	94.40%	94.83%
2 Schools	8.41%	8.53%	11.62%	12.42%	9.96%	9.95%	6.25%	6.30%	5.16%	5.03%
3 Schools	1.06%	1.06%	1.84%	1.67%	1.34%	1.49%	0.44%	0.80%	0.38%	0.14%
4 Schools	0.14%	0.20%	0.30%	0.28%	0.18%	0.31%	0.03%	0.11%	0.04%	
5 Schools	0.03%	0.04%	0.06%	0.09%	0.03%	0.07%			0.00%	
6 Schools	0.00%	0.01%	0.01%		0.01%	0.03%				
7 Schools	0.00%	0.00%	0.01%	0.01%						
Qualls Subscore	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
General Knowledge	9.41	9.84	8.71	9.16	8.90	9.28	9.65	10.00	10.41	10.70
Oral Communication	18.28	19.10	17.05	17.98	17.32	18.13	18.79	19.32	20.11	20.68
Written Communication	8.80	9.34	7.49	7.88	7.93	8.43	9.09	9.56	10.64	10.88
Math Concepts	15.60	16.59	14.08	15.02	14.55	15.53	16.14	16.78	17.73	18.35
Work Habits	16.60	16.94	15.66	15.97	16.13	16.39	16.87	16.84	17.71	18.02
Attentive Behavior	16.14	16.47	15.19	15.41	15.69	15.97	16.40	16.32	17.26	17.52

Table 3. Descriptive Statistics for All Students and DPIL Students Who Entered Kindergarten for the First Time between 2013-2019

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	N=248,666	N=18,679	N=63,490	N=4,705	N=82,737	N=5,098	N=18,762	N=1,662	N=83,677	N=7,214
	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL
Percent of Students	93.01%	6.99%	93.10%	6.90%	94.20%	5.80%	91.86%	8.14%	92.06%	7.94%
Retained in Kindergarten	7.26%	5.54%	11.94%	8.78%	7.16%	5.75%	4.75%	5.17%	4.37%	3.35%
Special Education	13.37%	14.56%	16.47%	17.70%	14.20%	16.65%	14.64%	17.63%	10.21%	10.33%
English Learner	10.64%	5.49%	9.62%	5.36%	17.08%	11.81%	10.90%	4.75%	4.26%	1.29%
Race/Ethnicity										
Asian	1.74%	0.73%	0.45%	0.30%	1.15%	0.77%	1.84%	0.96%	3.04%	0.94%
Black/African American	20.60%	12.51%	33.97%	25.04%	23.74%	15.10%	11.85%	7.64%	7.85%	3.62%
Hispanic	12.79%	8.16%	12.20%	8.82%	19.54%	14.75%	13.43%	7.70%	5.61%	3.17%
Native American/Alaskan Native	0.57%	0.55%	0.46%	0.38%	0.59%	0.43%	0.69%	0.84%	0.60%	0.67%
Native Hawaiian/Pacific Islander	0.92%	0.13%	1.12%	0.17%	1.26%	0.22%	0.60%	0.18%	0.35%	0.03%
White	59.59%	73.76%	46.88%	59.51%	49.92%	64.67%	67.95%	78.28%	79.50%	88.43%
Two or More Races	3.79%	4.17%	4.92%	5.78%	3.79%	4.06%	3.65%	4.39%	3.06%	3.15%
Meal Status										
Direct Certification (SNAP)	25.51%	25.19%								
Free (<130%)	32.85%	27.29%								
Reduced (130-185%)	7.64%	8.90%								
Full Price (>185%)	34.00%	38.62%								
Mobility										
1 School	90.37%	90.45%	86.01%	85.74%	88.65%	87.94%	93.40%	93.08%	94.61%	94.70%
2 Schools	8.44%	8.41%	11.87%	12.16%	9.85%	10.36%	6.14%	6.38%	5.01%	5.05%
3 Schools	1.01%	0.94%	1.75%	1.72%	1.27%	1.37%	0.42%	0.48%	0.33%	0.24%
4 Schools	0.15%	0.17%	0.31%	0.32%	0.19%	0.27%	0.03%	0.06%	0.03%	0.01%
5 Schools	0.03%	0.03%	0.06%	0.06%	0.03%	0.04%			0.01%	
6 Schools	0.00%	0.01%	0.00%		0.01%	0.02%				
7 Schools	0.00%		0.00%							

Table 4. Descriptive Statistics for All Students and DPIL Students Who Entered 3rd Grade for the First Time between 2016-2019

	3rd Grade		Direct Cert.		Free		Reduced		Full Price	
	N=150,462	N=7,387	N=52,265	N=2,284	N=37,628	N=1,753	N=11,193	N=670	N=49,340	N=2,680
	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL
Percent of Students	95.32%	4.68%	95.81%	4.19%	95.55%	4.45%	94.35%	5.65%	94.85%	5.15%
Retained in 3rd Grade	6.27%	4.52%	9.62%	8.36%	6.89%	4.05%	3.40%	2.69%	2.89%	2.01%
Special Education	15.20%	15.35%	18.94%	18.78%	15.92%	16.31%	15.84%	19.25%	10.58%	10.82%
English Learner	9.96%	6.93%	9.35%	9.06%	18.96%	13.46%	10.72%	5.97%	3.61%	1.08%
Race/Ethnicity										
Asian	1.68%	0.95%	0.43%	0.44%	1.47%	1.08%	1.91%	2.24%	2.99%	0.97%
Black/African American	20.19%	12.98%	34.42%	24.52%	19.54%	14.15%	11.06%	7.16%	6.81%	3.84%
Hispanic	12.92%	10.17%	12.19%	12.43%	22.64%	18.31%	14.67%	8.96%	5.54%	3.21%
Native American/Alaskan Native	0.58%	0.50%	0.45%	0.31%	0.62%	0.40%	0.72%	0.90%	0.64%	0.63%
Native Hawaiian/Pacific Islander	0.93%	0.16%	1.00%	0.13%	1.47%	0.11%	0.78%	0.60%	0.36%	0.11%
White	60.06%	71.11%	46.83%	56.48%	50.87%	61.95%	67.48%	76.12%	80.78%	88.32%
Two or More Races	3.64%	4.13%	4.67%	5.69%	3.39%	3.99%	3.39%	4.03%	2.88%	2.91%
Meal Status										
Direct Certification (SNAP)	34.74%	30.92%								
Free (<130%)	25.01%	23.73%								
Reduced (130-185%)	7.44%	9.07%								
Full Price (>185%)	32.80%	36.28%								
Mobility										
1 School	90.06%	91.02%	84.03%	84.59%	90.09%	91.22%	93.64%	93.73%	95.54%	95.71%
2 Schools	8.66%	8.01%	13.21%	12.96%	8.92%	8.21%	6.05%	6.27%	4.29%	4.10%
3 Schools	1.05%	0.77%	2.21%	1.97%	0.86%	0.40%	0.27%		0.16%	0.19%
4 Schools	0.19%	0.16%	0.44%	0.39%	0.12%	0.17%	0.03%		0.01%	
5 Schools	0.03%	0.01%	0.09%	0.04%	0.01%		0.01%			
6 Schools	0.00%	0.01%	0.01%	0.04%						
7 Schools	0.00%		0.00%		0.00%					

Table 5. Descriptive Statistics for All Students and DPIL Students Who Entered School between 2013-2016 and Were Retained between K-3rd

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	N=131,530	N=7,223	N=26,229	N=1,424	N=51,421	N=2,494	N=10,615	N=690	N=43,265	N=2,618
	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL
Percent of Students	94.79%	5.21%	94.86%	5.14%	95.37%	4.63%	93.90%	6.10%	94.29%	5.71%
Retained K-3rd	10.46%	8.68%	17.92%	13.93%	11.35%	9.18%	7.39%	7.54%	5.65%	5.65%
Special Education in Kindergarten	12.80%	13.90%	15.70%	15.48%	13.88%	16.72%	13.62%	17.25%	9.58%	9.47%
English Learner in Kindergarten	10.05%	7.34%	9.93%	5.84%	16.21%	14.55%	9.49%	5.94%	3.02%	1.64%
Race/Ethnicity										
Asian	1.25%	0.90%	0.35%	0.49%	0.88%	1.04%	1.65%	1.01%	2.12%	0.95%
Black/African American	20.33%	13.28%	32.90%	28.15%	26.29%	16.56%	12.66%	9.28%	7.64%	3.13%
Hispanic	12.46%	10.08%	13.05%	9.71%	18.95%	18.00%	12.30%	8.41%	4.53%	3.17%
Native American/Alaskan Native	0.51%	0.48%	0.37%	0.35%	0.53%	0.32%	0.61%	1.16%	0.55%	0.53%
Native Hawaiian/Pacific Islander	0.73%	0.17%	0.93%	0.14%	1.09%	0.24%	0.43%	0.43%	0.27%	0.04%
White	61.13%	71.00%	47.75%	55.67%	48.49%	59.34%	68.93%	75.94%	82.12%	89.11%
Two or More Races	3.58%	4.10%	4.64%	5.49%	3.77%	4.49%	3.43%	3.77%	2.77%	3.06%
Meal Status in Kindergarten										
Direct Certification (SNAP)	19.94%	19.67%								
Free (<130%)	39.09%	34.53%								
Reduced (130-185%)	8.07%	9.55%								
Full Price (>185%)	32.89%	36.25%								
Mobility in Kindergarten										
1 School	90.25%	90.18%	85.98%	85.64%	88.39%	88.09%	93.39%	91.88%	94.24%	94.19%
2 Schools	8.49%	8.57%	11.84%	12.53%	10.00%	9.86%	6.15%	7.39%	5.27%	5.50%
3 Schools	1.08%	1.05%	1.81%	1.55%	1.38%	1.68%	0.43%	0.72%	0.44%	0.27%
4 Schools	0.15%	0.18%	0.30%	0.28%	0.19%	0.32%	0.03%		0.04%	0.04%
5 Schools	0.02%		0.06%		0.02%				0.00%	
6 Schools	0.00%	0.01%	0.01%		0.01%	0.04%				
7 Schools	0.00%		0.00%							

Table 6. Descriptive Statistics for All Students and DPIL Students Who Took the ACT Aspire-RLA Assessment

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	N=139,716	N=7,162	N=48,563	N=2,223	N=35,047	N=1,717	N=10,799	N=654	N=45,343	N=2,568
	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL
Percent of Students	95.14%	4.86%	95.62%	4.38%	95.33%	4.67%	94.29%	5.71%	94.64%	5.36%
Proficient on ACT Aspire-RLA	37.90%	44.82%	27.01%	30.27%	35.94%	39.84%	43.86%	44.65%	58.52%	60.79%
Special Education in 3rd Grade	15.39%	15.33%	19.16%	18.80%	16.12%	16.31%	15.87%	18.65%	10.70%	10.83%
English Learner in 3rd Grade	10.00%	6.93%	9.52%	9.00%	19.33%	13.51%	10.77%	5.96%	3.16%	0.97%
Race/Ethnicity										
Asian	1.54%	0.94%	0.42%	0.45%	1.44%	1.11%	1.87%	2.29%	2.72%	0.90%
Black/African American	19.68%	13.04%	34.34%	24.70%	19.31%	14.21%	10.94%	7.34%	6.50%	3.62%
Hispanic	12.88%	10.22%	12.37%	12.42%	23.10%	18.40%	14.84%	9.02%	5.12%	3.15%
Native American/Alaskan Native	0.56%	0.49%	0.45%	0.31%	0.60%	0.41%	0.71%	0.92%	0.60%	0.58%
Native Hawaiian/Pacific Islander	0.85%	0.14%	0.98%	0.13%	1.41%	0.12%	0.72%	0.31%	0.30%	0.12%
White	60.92%	71.10%	46.88%	56.37%	50.83%	61.74%	67.56%	76.45%	81.95%	88.75%
Two or More Races	3.59%	4.08%	4.56%	5.62%	3.31%	4.02%	3.35%	3.67%	2.82%	2.88%
Meal Status in 3rd Grade										
Direct Certification (SNAP)	34.57%	31.04%								
Free (<130%)	25.02%	23.97%								
Reduced (130-185%)	7.80%	9.13%								
Full Price (>185%)	32.61%	35.86%								
Mobility in 3rd Grade										
1 School	90.40%	90.97%	84.62%	84.66%	90.50%	91.09%	93.86%	93.88%	95.62%	95.60%
2 Schools	8.39%	8.10%	12.77%	13.00%	8.55%	8.33%	5.86%	6.12%	4.22%	4.21%
3 Schools	1.01%	0.77%	2.10%	1.93%	0.84%	0.41%	0.25%		0.16%	0.19%
4 Schools	0.17%	0.14%	0.42%	0.31%	0.10%	0.17%	0.03%		0.01%	
5 Schools	0.03%	0.01%	0.09%	0.04%	0.01%					
6 Schools	0.00%	0.01%	0.01%	0.04%						
7 Schools	0.00%		0.00%		0.00%					

Table 7. Descriptive Statistics for All Students and DPIL Students Who Took the ACT Aspire-Math Assessment

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	N=139,999	N=7,162	N=48,621	N=2,223	N=35,144	N=1,717	N=10,815	N=654	N=45,453	N=2,568
	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL
Percent of Students	95.15%	4.85%	95.63%	4.37%	95.34%	4.66%	94.30%	5.70%	94.65%	5.35%
Proficient on ACT Aspire-Math	54.90%	63.21%	45.49%	48.72%	55.05%	59.58%	63.41%	64.22%	75.40%	77.92%
Special Education in 3rd Grade	15.39%	15.34%	19.17%	18.85%	16.12%	16.31%	15.90%	18.65%	10.69%	10.83%
English Learner in 3rd Grade	10.10%	6.91%	9.53%	8.95%	19.46%	13.51%	10.85%	5.96%	3.35%	0.97%
Race/Ethnicity										
Asian	1.55%	0.94%	0.42%	0.45%	1.45%	1.11%	1.89%	2.29%	2.74%	0.90%
Black/African American	19.66%	13.04%	34.34%	24.70%	19.27%	14.21%	10.94%	7.34%	6.50%	3.62%
Hispanic	12.95%	10.22%	12.37%	12.42%	23.19%	18.40%	14.87%	9.02%	5.24%	3.15%
Native American/Alaskan Native	0.56%	0.49%	0.45%	0.31%	0.60%	0.41%	0.71%	0.92%	0.60%	0.58%
Native Hawaiian/Pacific Islander	0.87%	0.14%	0.99%	0.13%	1.44%	0.12%	0.76%	0.31%	0.33%	0.12%
White	60.84%	71.10%	46.87%	56.37%	50.76%	61.74%	67.49%	76.45%	81.78%	88.75%
Two or More Races	3.58%	4.08%	4.56%	5.62%	3.30%	4.02%	3.35%	3.67%	2.81%	2.88%
Meal Status in 3rd Grade										
Direct Certification (SNAP)	34.54%	31.04%								
Free (<130%)	25.04%	23.97%								
Reduced (130-185%)	7.79%	9.13%								
Full Price (>185%)	32.62%	35.86%								
Mobility in 3rd Grade										
1 School	90.38%	90.97%	84.60%	84.66%	90.49%	91.09%	93.86%	93.88%	95.59%	95.60%
2 Schools	8.40%	8.10%	12.78%	13.00%	8.56%	8.33%	5.86%	6.12%	4.24%	4.21%
3 Schools	1.01%	0.77%	2.10%	1.93%	0.84%	0.41%	0.25%		0.16%	0.19%
4 Schools	0.17%	0.14%	0.42%	0.31%	0.10%	0.17%	0.03%		0.01%	
5 Schools	0.03%	0.01%	0.09%	0.04%	0.01%					
6 Schools	0.00%	0.01%	0.01%	0.04%						
7 Schools	0.00%		0.00%		0.00%					

Table 8. Descriptive Statistics for All and DPIL Students Who Took the ACT Aspire-Science Assessment

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	N=138,374	N=7,095	N=48,046	N=2,199	N=34,718	N=1,690	N=10,675	N=650	N=45,139	N=2,556
	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL	Non-DPIL	DPIL
Percent of Students	95.14%	4.86%	95.62%	4.38%	95.36%	4.64%	94.26%	5.74%	94.64%	5.36%
Proficient on ACT Aspire-Science	35.10%	43.58%	24.22%	28.01%	32.84%	37.22%	41.63%	45.54%	56.31%	60.68%
Special Education in 3rd Grade	14.43%	14.45%	18.06%	17.83%	15.04%	14.97%	14.77%	17.85%	10.06%	10.33%
English Learner in 3rd Grade	10.12%	6.89%	9.57%	9.00%	19.53%	13.49%	10.86%	5.85%	3.35%	0.98%
Race/Ethnicity										
Asian	1.55%	0.94%	0.42%	0.45%	1.45%	1.12%	1.90%	2.31%	2.74%	0.90%
Black/African American	19.64%	13.02%	34.40%	24.78%	19.23%	14.14%	10.94%	7.38%	6.47%	3.60%
Hispanic	12.96%	10.15%	12.40%	12.32%	23.26%	18.22%	14.89%	9.08%	5.25%	3.21%
Native American/Alaskan Native	0.56%	0.48%	0.45%	0.32%	0.60%	0.41%	0.72%	0.92%	0.60%	0.55%
Native Hawaiian/Pacific Islander	0.87%	0.14%	1.00%	0.14%	1.44%	0.12%	0.77%	0.31%	0.33%	0.12%
White	60.83%	71.16%	46.75%	56.25%	50.74%	61.95%	67.44%	76.46%	81.79%	88.73%
Two or More Races	3.59%	4.10%	4.58%	5.73%	3.29%	4.02%	3.35%	3.54%	2.82%	2.90%
Meal Status in 3rd Grade										
Direct Certification (SNAP)	34.49%	30.99%								
Free (<130%)	24.99%	23.82%								
Reduced (130-185%)	7.77%	9.16%								
Full Price (>185%)	32.74%	36.03%								
Mobility in 3rd Grade										
1 School	90.39%	91.04%	84.60%	84.77%	90.46%	91.07%	93.88%	93.85%	95.59%	95.70%
2 Schools	8.41%	8.02%	12.79%	12.87%	8.60%	8.34%	5.85%	6.15%	4.24%	4.11%
3 Schools	1.00%	0.78%	2.10%	1.96%	0.83%	0.41%	0.24%		0.16%	0.20%
4 Schools	0.17%	0.14%	0.41%	0.32%	0.10%	0.18%	0.03%		0.01%	
5 Schools	0.03%	0.01%	0.09%	0.05%	0.01%					
6 Schools	0.00%	0.01%	0.01%	0.05%						
7 Schools	0.00%		0.00%		0.00%					

Table 9. Summary of Univariate Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent

Variables	General Knowledge		Oral Communication		Written Communication		Math Concepts		Work Habits		Attentive Behavior	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.436	**	0.870	**	0.509	**	0.976	**	0.340	**	0.306	**
R-square	0.001		0.001		0.001		0.002		0.001		0.001	
<i>N</i> =	164,541		164,487		164,175		163,453		165,040		165,030	

p* <.05. *p* <.01.

Table 10. Summary of Univariate Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent, Split on Meal Status

Variables	General Knowledge		Oral Communication		Written Communication		Math Concepts		Work Habits		Attentive Behavior	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Direct Certification Meal Status (SNAP)												
Imagination Library Participant (Y/N)	0.441	**	0.923	**	0.390	**	0.935	**	0.302	**	0.212	*
R-square	0.035		0.037		0.020		0.038		0.015		0.010	
<i>N</i> =	37,962		37,961		37,864		37,648		38,082		38,082	
Free Meal Status (<130%)												
Imagination Library Participant (Y/N)	0.379	**	0.813	**	0.493	**	0.984	**	0.257	**	0.282	**
R-square	0.028		0.031		0.023		0.038		0.012		0.013	
<i>N</i> =	59,402		59,387		59,282		58,924		59,633		59,633	
Reduced Meal Status (130%-185%)												
Imagination Library Participant (Y/N)	0.346	**	0.536	**	0.465	**	0.635	**	-0.034		-0.085	
R-square	0.032		0.026		0.025		0.030		0.002		0.005	
<i>N</i> =	13,285		13,280		13,274		13,241		13,330		13,332	
Full Price Meal Status (>185%)												
Imagination Library Participant (Y/N)	0.288	**	0.571	**	0.227	**	0.615	**	0.302	**	0.262	**
R-square	0.030		0.031		0.012		0.032		0.019		0.016	
<i>N</i> =	53,892		53,859		53,755		53,640		53,995		53,986	

p* <.05. *p* <.01.

Table 11. Summary of Multiple Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent

Variables	General Knowledge		Oral Communication		Written Communication		Math Concepts		Work Habits		Attentive Behavior	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.273	**	0.528	**	0.362	**	0.669	**	0.221	**	0.208	**
Special Education (Y/N)	-1.856	**	-4.357	**	-2.833	**	-3.775	**	-3.155	**	-3.089	**
English Language Learner (Y/N)	-1.446	**	-3.368	**	-0.920	**	-2.386	**	-0.672	**	-0.502	**
Race/Ethnicity (Dummy Code, Ref.=White)												
Asian	0.244	**	-0.548	**	2.261	**	1.3262	**	0.5791	**	0.84268	**
Black/African American	-0.492	**	-1.162	**	-0.130	**	-0.9228	**	-0.626	**	-0.499	**
Hispanic	-0.460	**	-0.971	**	-0.012		-0.717	**	0.183	**	0.299	**
Native American/Alaskan Native	-0.187	*	-0.440	**	0.080		-0.370	*	-0.181		-0.043	
Native Hawaiian/Pacific Islander	-1.946	**	-3.685	**	-1.509	**	-3.481	**	-1.650	**	-1.497	**
Two or More Races	-0.183	**	-0.237	**	0.023		-0.230	**	-0.151	**	-0.155	**
Meal Status (Dummy Code, Ref.=Full Price)												
Direct Certification (SNAP)	-1.249	**	-2.074	**	-2.767	**	-2.806	**	-1.576	**	-1.645	**
Free (<130%)	-1.028	**	-1.726	**	-2.334	**	-2.3033	**	-1.211	**	-1.2566	**
Reduced (130-185%)	-0.503	**	-0.750	**	-1.323	**	-1.1237	**	-0.648	**	-0.6907	**
Number of Schools in AY	-0.289	**	-0.416	**	-0.515	**	-0.599	**	-0.521	**	-0.569	**
R-square	0.154		0.182		0.125		0.159		0.098		0.088	
N=	164,541		164,487		164,175		163,453		165,040		165,030	

p* <.05. *p* <.01.

Table 12. Summary of Multiple Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent-General Knowledge

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.273 **		0.316 **		0.305 **		0.304 **		0.209 **	
Special Education (Y/N)	-1.856 **		-1.797 **		-1.891 **		-1.874 **		-1.837 **	
English Language Learner (Y/N)	-1.446 **		-1.308 **		-1.390 **		-1.582 **		-1.769 **	
Race/Ethnicity (Dummy Code, Ref.=White)										
Asian	0.244 **		0.068		0.055		0.470 **		0.399 **	
Black/African American	-0.492 **		-0.431 **		-0.473 **		-0.304 **		-0.693 **	
Hispanic	-0.460 **		-0.372 **		-0.520 **		-0.216 *		-0.602 **	
Native American/Alaskan Native	-0.187 *		-0.587 *		-0.117		0.183		-0.174	
Native Hawaiian/Pacific Islander	-1.946 **		-1.833 **		-2.170 **		-1.679 **		-1.610 **	
Two or More Races	-0.183 **		-0.248 **		-0.140 *		0.144		-0.232 **	
Meal Status (Dummy Code, Ref.=Full Price)										
Direct Certification (SNAP)	-1.249 **									
Free (<130%)	-1.028 **									
Reduced (130-185%)	-0.503 **									
Number of Schools in AY	-0.289 **		-0.251 **		-0.249 **		-0.085		-0.500 **	
R-square	0.154		0.080		0.106		0.098		0.088	
N=	164,541		37,962		59,402		13,285		53,892	

p* <.05. *p* <.01.

Table 13. Summary of Multiple Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent-Oral Communication

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.528 **		0.633 **		0.642 **		0.442 **		0.388 **	
Special Education (Y/N)	-4.357 **		-4.217 **		-4.369 **		-4.559 **		-4.390 **	
English Language Learner (Y/N)	-3.368 **		-3.091 **		-3.303 **		-3.564 **		-3.913 **	
Race/Ethnicity (Dummy Code, Ref.=White)										
Asian	-0.548 **		-0.843		-1.196 **		0.083		-0.183	
Black/African American	-1.162 **		-1.011 **		-1.223 **		-0.779 **		-1.364 **	
Hispanic	-0.971 **		-0.886 **		-1.071 **		-0.413 *		-1.248 **	
Native American/Alaskan Native	-0.440 **		-1.152 *		-0.181		-0.250		-0.443	
Native Hawaiian/Pacific Islander	-3.685 **		-3.502 **		-4.075 **		-3.063 **		-3.136 **	
Two or More Races	-0.237 **		-0.287 *		-0.122		0.074		-0.389 **	
Meal Status (Dummy Code, Ref.=Full Price)										
Direct Certification (SNAP)	-2.074 **									
Free (<130%)	-1.726 **									
Reduced (130-185%)	-0.750 **									
Number of Schools in AY	-0.416 **		-0.338 **		-0.382 **		-0.143		-0.709 **	
R-square	0.182		0.113		0.141		0.140		0.128	
N=	164,487		37,961		59,387		13,280		53,859	

p* <.05. *p* <.01.

Table 14. Summary of Multiple Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent-Written Communication

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.362 **		0.347 **		0.509 **		0.517 **		0.199 *	
Special Education (Y/N)	-2.833 **		-2.532 **		-2.740 **		-2.902 **		-3.235 **	
English Language Learner (Y/N)	-0.920 **		-0.650 **		-0.861 **		-1.175 **		-1.746 **	
Race/Ethnicity (Dummy Code, Ref.=White)										
Asian	2.261 **		1.796 **		1.753 **		2.012 **		2.840 **	
Black/African American	-0.130 **		-0.054		-0.101 *		0.277 *		-0.298 **	
Hispanic	-0.012		0.034		0.114		0.054		-0.515 **	
Native American/Alaskan Native	0.080		-0.366		0.537 *		0.544		-0.332	
Native Hawaiian/Pacific Islander	-1.509 **		-1.367 **		-1.539 **		-2.202 **		-1.820 **	
Two or More Races	0.023		-0.064		0.025		0.734 **		0.001	
Meal Status (Dummy Code, Ref.=Full Price)										
Direct Certification (SNAP)	-2.767 **									
Free (<130%)	-2.334 **									
Reduced (130-185%)	-1.323 **									
Number of Schools in AY	-0.515 **		-0.483 **		-0.376 **		-0.118		-0.985 **	
R-square	0.125		0.047		0.050		0.059		0.058	
N=	164,175		37,864		59,282		13,274		53,755	

p* <.05. *p* <.01.

Table 15. Summary of Multiple Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent-Math Concepts

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.669 **		0.718 **		0.868 **		0.589 **		0.484 **	
Special Education (Y/N)	-3.775 **		-3.617 **		-3.849 **		-3.904 **		-3.744 **	
English Language Learner (Y/N)	-2.386 **		-2.085 **		-2.313 **		-2.682 **		-3.107 **	
Race/Ethnicity (Dummy Code, Ref.=White)										
Asian	1.326 **		0.433		1.119 **		1.636 **		1.671 **	
Black/African American	-0.923 **		-0.786 **		-0.895 **		-0.411 **		-1.343 **	
Hispanic	-0.717 **		-0.650 **		-0.708 **		-0.389 *		-1.070 **	
Native American/Alaskan Native	-0.370 *		-1.052 *		-0.072		0.080		-0.476	
Native Hawaiian/Pacific Islander	-3.481 **		-3.333 **		-3.721 **		-3.189 **		-3.362 **	
Two or More Races	-0.230 **		-0.322 *		-0.171		0.443		-0.327 **	
Meal Status (Dummy Code, Ref.=Full Price)										
Direct Certification (SNAP)	-2.806 **									
Free (<130%)	-2.303 **									
Reduced (130-185%)	-1.124 **									
Number of Schools in AY	-0.599 **		-0.541 **		-0.489 **		-0.192		-1.051 **	
R-square	0.159		0.076		0.095		0.097		0.085	
N=	163,453		37,648		58,924		13,241		53,640	

p* <.05. *p* <.01.

Table 16. Summary of Multiple Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent-Work Habits

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.221 **		0.240 *		0.241 **		0.028		0.226 **	
Special Education (Y/N)	-3.155 **		-3.085 **		-3.123 **		-3.199 **		-3.212 **	
English Language Learner (Y/N)	-0.672 **		-0.482 **		-0.640 **		-0.938 **		-1.340 **	
Race/Ethnicity (Dummy Code, Ref.=White)										
Asian	0.579 **		1.453 **		0.721 **		0.616 *		0.627 **	
Black/African American	-0.626 **		-0.476 **		-0.566 **		-0.463 **		-0.948 **	
Hispanic	0.183 **		0.327 **		0.304 **		0.275		-0.319 **	
Native American/Alaskan Native	-0.181		-0.743		0.152		-0.053		-0.275	
Native Hawaiian/Pacific Islander	-1.650 **		-1.330 **		-1.844 **		-1.671 **		-1.515 **	
Two or More Races	-0.151 **		-0.154		0.041		0.127		-0.402 **	
Meal Status (Dummy Code, Ref.=Full Price)										
Direct Certification (SNAP)	-1.576 **									
Free (<130%)	-1.211 **									
Reduced (130-185%)	-0.648 **									
Number of Schools in AY	-0.521 **		-0.466 **		-0.420 **		-0.554 **		-0.811 **	
R-square	0.098		0.062		0.063		0.073		0.073	
N=	165,040		38,082		59,633		13,330		53,995	

p* <.05. *p* <.01.

Table 17. Summary of Multiple Regression, AY 2013-AY 2017 Kindergarten Qualls Scores Dependent-Attentive Behavior

Variables	All Students		Direct Cert.		Free		Reduced		Full Price	
	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig	<i>b</i>	sig
Imagination Library Participant (Y/N)	0.208 **		0.178		0.290 **		-0.008		0.193 **	
Special Education (Y/N)	-3.089 **		-2.997 **		-3.064 **		-3.073 **		-3.169 **	
English Language Learner (Y/N)	-0.502 **		-0.364 **		-0.471 **		-0.742 **		-1.214 **	
Race/Ethnicity (Dummy Code, Ref.=White)										
Asian	0.843 **		1.827 **		0.943 **		1.095 **		0.873 **	
Black/African American	-0.499 **		-0.313 **		-0.417 **		-0.426 **		-0.899 **	
Hispanic	0.299 **		0.459 **		0.470 **		0.402 *		-0.313 **	
Native American/Alaskan Native	-0.043		-0.531		0.211		0.296		-0.129	
Native Hawaiian/Pacific Islander	-1.497 **		-1.027 **		-1.686 **		-1.417 *		-1.707 **	
Two or More Races	-0.155 **		-0.155		0.083		0.047		-0.432 **	
Meal Status (Dummy Code, Ref.=Full Price)										
Direct Certification (SNAP)	-1.645 **									
Free (<130%)	-1.257 **									
Reduced (130-185%)	-0.691 **									
Number of Schools in AY	-0.569 **		-0.536 **		-0.430 **		-0.608 **		-0.894 **	
R-square	0.088		0.055		0.056		0.061		0.064	
N=	165,040		38,082		59,633		13,332		53,986	

p* <.05. *p* <.01.

Table 18. Logistic Regression Analysis of Predictors of Being Retained in Kindergarten

Variables	All Students			Direct Cert.			Free			Reduced			Full Price		
	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR
Imagination Library Participant (Y/N)	-0.293 **	0.033	0.746	-0.385 **	0.053	0.680	-0.296 **	0.062	0.744	0.020	0.117	1.020	-0.212 **	0.068	0.809
Special Education (Y/N)	0.788 **	0.018	2.198	0.681 **	0.028	1.976	0.726 **	0.031	2.066	1.158 **	0.071	3.183	0.977 **	0.041	2.657
English Language Learner (Y/N)	-0.226 **	0.039	0.797	-0.401 **	0.068	0.670	-0.191 **	0.063	0.826	0.363 **	0.170	1.438	0.183 *	0.083	1.201
Race/Ethnicity (White=Reference Group)															
Asian	0.211 **	0.067	1.235	-0.330	0.225	0.719	-0.262	0.147	0.769	0.028	0.248	1.028	0.433 **	0.091	1.543
Black/African American	-0.084 **	0.020	0.919	-0.158 **	0.027	0.854	-0.213 **	0.034	0.808	-0.377 **	0.118	0.686	0.513 **	0.053	1.670
Hispanic	0.002 *	0.034	1.002	-0.012	0.056	0.988	-0.174 **	0.058	0.841	-0.513 **	0.162	0.599	0.515 **	0.070	1.674
Native American/Alaskan Native	0.211	0.095	1.235	0.175	0.163	1.191	0.160	0.158	1.173	0.291	0.350	1.338	0.250	0.199	1.284
Native Hawaiian/Pacific Islander	0.611 **	0.074	1.842	0.568 **	0.120	1.766	0.460 **	0.117	1.584	0.480	0.340	1.616	1.159 **	0.183	3.187
Two or More Races	-0.032	0.039	0.968	-0.107	0.057	0.899	-0.080	0.069	0.923	-0.193	0.189	0.824	0.176	0.093	1.192
Meal Status (Full Price=Reference Group)															
Direct Certification (SNAP)	1.026 **	0.021	2.789												
Free (<130%)	0.498 **	0.022	1.646												
Reduced (130-185%)	0.083 *	0.037	1.087												
Number of Schools in AY	0.308 **	0.017	1.361	0.358 **	0.023	1.430	0.219 **	0.029	1.245	0.341 **	0.101	1.407	0.205 **	0.056	1.227
Constant	-3.519 **	0.025	0.030	-2.477 **	0.035	0.084	-2.839 **	0.04	0.058	-3.565 **	0.121	0.028	-3.581 **	0.064	0.028
Cox & Snell R-square	0.021			0.140			0.008			0.013			0.008		
Nagelkerke R-square	0.051			0.028			0.020			0.042			0.027		
N=	267,345			68,195			87,835			20,424			90,891		

p* <.05. *p* <.01.

Table 19. Logistic Regression Analysis of Predictors of Being Retained in 3rd Grade

Variables	All Students			Direct Cert.			Free			Reduced			Full Price		
	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR
Imagination Library Participant (Y/N)	-0.325 **	0.065	0.722	-0.187 *	0.092	0.830	-0.582 **	0.134	0.559	-0.228	0.258	0.796	-0.348 *	0.148	0.706
Special Education (Y/N)	0.106 **	0.032	1.112	0.050 *	0.044	1.051	0.074	0.059	1.077	0.009	0.150	1.009	0.348 **	0.080	1.417
English Language Learner (Y/N)	-0.277 **	0.065	0.758	-0.322	0.107	0.725	-0.222 *	0.104	0.801	-0.275	0.288	0.760	-0.025	0.150	0.975
Race/Ethnicity (White=Reference Group)															
Asian	0.787 **	0.090	2.196	0.484 **	0.272	1.623	0.512 **	0.176	1.668	0.211	0.457	1.235	1.036 **	0.123	2.817
Black/African American	-0.074 *	0.031	0.928	-0.147	0.040	0.863	-0.048	0.058	0.953	-0.318	0.193	0.727	0.264 **	0.102	1.302
Hispanic	-0.112 *	0.056	0.894	-0.147	0.088	0.864	-0.267 **	0.096	0.765	-0.266	0.244	0.766	0.330 **	0.126	1.390
Native American/Alaskan Native	0.464 **	0.147	1.591	0.019	0.281	1.019	0.641 **	0.231	1.899	0.777	0.505	2.174	0.645 *	0.294	1.906
Native Hawaiian/Pacific Islander	0.066	0.127	1.069	-0.030	0.197	0.971	0.125	0.192	1.133	0.753	0.544	2.124	-0.580	0.480	0.560
Two or More Races	0.149 **	0.055	1.160	0.097	0.075	1.102	0.156	0.104	1.169	0.589 *	0.233	1.802	0.086	0.153	1.090
Meal Status (Full Price=Reference Group)															
Direct Certification (SNAP)	0.658 **	0.035	1.932												
Free (<130%)	0.654 **	0.037	1.924												
Reduced (130-185%)	0.066	0.061	1.068												
Number of Schools in AY	2.545 **	0.022	12.74	2.521 **	0.030	12.437	2.400 **	0.042	11.019	2.954 **	0.108	19.182	2.742 **	0.058	15.516
Constant	-6.486 **	0.041	0.002	-5.746 **	0.055	0.003	-5.598 **	0.068	0.004	-6.966 *	0.171	0.001	-6.845 **	0.083	0.001
Cox & Snell R-square	0.116			0.175			0.096			0.063			0.038		
Nagelkerke R-square	0.313			0.373			0.246			0.248			0.167		
N	157,813			54,549			39,381			11,863			52,020		

* $p < .05$. ** $p < .01$.

Table 20. Logistic Regression Analysis of Predictors of Being Retained between Kindergarten and 3rd Grade

Variables	All Students			Direct Cert.			Free			Reduced			Full Price		
	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR
Imagination Library Participant (Y/N)	-0.218 **	0.044	0.804	-0.323 **	0.079	0.724	-0.300 **	0.071	0.741	-0.080	0.151	0.923	0.038	0.088	1.039
Special Education (Y/N)	0.884 **	0.022	2.420	0.800 **	0.038	2.226	0.776 **	0.033	2.173	1.121 **	0.081	3.069	1.165 **	0.049	3.205
English Language Learner (Y/N)	-0.242 **	0.051	0.785	-0.226 *	0.093	0.798	-0.127	0.073	0.880	0.011	0.214	1.011	-0.279 *	0.143	0.756
Race/Ethnicity (White=Reference Group)															
Asian	-0.790 **	0.133	0.454	-0.781 *	0.373	0.458	-1.021 **	0.228	0.36	-0.751	0.405	0.472	-0.629 **	0.209	0.533
Black/African American	-0.099 **	0.023	0.906	-0.138 **	0.036	0.871	-0.211 **	0.033	0.810	-0.548 **	0.130	0.578	0.561 **	0.064	1.752
Hispanic	-0.163 **	0.044	0.850	-0.200 *	0.079	0.819	-0.400 **	0.066	0.670	-0.440 *	0.184	0.644	0.601 **	0.096	1.823
Native American/Alaskan Native	-0.350 *	0.147	0.705	-0.146	0.270	0.864	-0.578 *	0.229	0.561	-0.625	0.595	0.535	-0.175	0.311	0.840
Native Hawaiian/Pacific Islander	0.101	0.110	1.106	0.105	0.189	1.111	-0.210	0.157	0.810	-0.314	0.621	0.730	0.995 **	0.303	2.705
Two or More Races	-0.071	0.047	0.931	-0.088	0.077	0.915	-0.163 *	0.073	0.850	-0.268	0.213	0.765	0.183	0.118	1.201
Meal Status (Full Price=Reference Group)															
Direct Certification (SNAP)	1.235 **	0.027	3.438												
Free (<130%)	0.740 **	0.025	2.096												
Reduced (130-185%)	0.268 **	0.042	1.307												
Number of Schools in AY	0.300 **	0.020	1.350	0.331 **	0.031	1.393	0.246 **	0.030	1.279	0.418 **	0.110	1.520	0.282 **	0.064	1.325
Constant	-3.211 **	0.030	0.040	-1.975 **	0.046	0.139	-2.322 **	0.041	0.098	-3.08 **	0.131	0.046	-3.374 **	0.074	0.034
Cox & Snell R-square	0.034			0.022			0.016			0.02			0.013		
Nagelkerke R-square	0.071			0.037			0.031			0.048			0.038		
N	138,753			27,650			53,615			11,305			45,883		

* $p < .05$. ** $p < .01$.

Table 21. Logistic Regression Analysis of Predictors of Being Proficient on 3rd Grade ACT Aspire by Subsection

Variables	Reading & Language Arts			Mathematics			Science		
	Beta	(SE)	OR	Beta	(SE)	OR	Beta	(SE)	OR
Imagination Library Participant (Y/N)	0.068 **	0.026	1.070	0.075 **	0.027	1.078	0.113 **	0.027	1.119
Special Education (Y/N)	-1.473 **	0.020	0.229	-1.679 **	0.017	0.187	-1.547 **	0.022	0.213
English Language Learner (Y/N)	-1.022 **	0.029	0.360	-0.918 **	0.029	0.399	-1.126 **	0.030	0.324
Race/Ethnicity (White=Reference Group)									
Asian	0.838 **	0.049	2.312	0.848 **	0.058	2.334	0.728 **	0.049	2.072
Black/African American	-0.821 **	0.017	0.440	-0.879 **	0.015	0.415	-1.104 **	0.018	0.332
Hispanic	0.188 **	0.024	1.206	0.133 **	0.026	1.143	0.009	0.025	1.009
Native American/Alaskan Native	-0.320 **	0.077	0.726	-0.209 **	0.077	0.811	-0.311 **	0.078	0.733
Native Hawaiian/Pacific Islander	-0.367 **	0.077	0.693	-0.677 **	0.067	0.508	-1.076 **	0.097	0.341
Two or More Races	-0.052	0.030	0.949	-0.153 **	0.031	0.858	-0.178	0.031	0.837
Meal Status (Full Price=Reference Group)									
Direct Certification (SNAP)	-0.991 **	0.015	0.371	-0.931 **	0.015	0.394	-0.988 **	0.015	0.372
Free (<130%)	-0.654 **	0.015	0.520	-0.630 **	0.016	0.533	-0.642 **	0.016	0.526
Reduced (130-185%)	-0.458 **	0.022	0.633	-0.415 **	0.024	0.660	-0.431 **	0.022	0.650
Number of Schools in AY	-0.216 **	0.017	0.806	-0.239 **	0.016	0.787	-0.220 **	0.018	0.802
Constant	0.790 **	0.021	2.202	1.690 **	0.021	5.421	0.735 **	0.021	2.086
Cox & Snell R-square	0.137			0.159			0.137		
Nagelkerke R-square	0.185			0.215			0.185		
N=	146,914			147,195			145,673		

** $p < .01$.

Table 22. Likelihood of Being Retained in Kindergarten

	All	Direct	Free	Reduced	Full Price
DPIIL Participants	↓	↓	↓	/	↓
SPED Students	↑	↑	↑	↑	↑
ELL Students	↓	↓	↓	↑	↑
Race/Ethnicity (Likelihood compared to Whites)					
Asian Students	↑	/	/	/	↑
Black Students	↓	↓	↓	↓	↑
Hispanic Students	/	/	↓	↓	↑
NA/AN Students	↑	/	/	/	/
NH/PI Students	↑	↑	↑	/	↑
Two or More Race Students	/	↓	/	/	/
Meal Status (Likelihood compared to Full Price)					
Direct Certification Students	↑				
Free Students	↑				
Reduced Students	↑				
Additional Schools	↑	↑	↑	↑	↑

↑=Increase ↓=Decrease /=No Change

Table 23. Likelihood of Being Retained in 3rd Grade

	All	Direct	Free	Reduced	Full Price
DPIL Participants	↓	↓	↓	/	↓
SPED Students	↑	/	/	/	↑
ELL Students	↓	↓	↓	/	/
Race/Ethnicity (Likelihood compared to Whites)					
Asian Students	↑	/	↑	/	↑
Black Students	↓	↓	/	/	↑
Hispanic Students	↓	/	↓	/	↑
NA/AN Students	↑	/	↑	/	↑
NH/PI Students	/	/	/	/	/
Two or More Race Students	↑	/	/	↑	/
Meal Status (Likelihood compared to Full Price)					
Direct Certification Students	↑				
Free Students	↑				
Reduced Students	/				
Additional Schools	↑	↑	↑	↑	↑

↑=Increase ↓=Decrease /=No Change

Table 24. Likelihood of Being Retained between K-3rd Grade

	All	Direct	Free	Reduced	Full Price
DPIL Participants	↓	↓	↓	/	/
SPED Students	↑	↑	↑	↑	↑
ELL Students	↓	↓	/	/	↓
Race/Ethnicity (Likelihood compared to Whites)					
Asian Students	↓	↓	↓	/	↓
Black Students	↓	↓	↓	↓	↑
Hispanic Students	↓	↓	↓	↓	↑
NA/AN Students	↓	/	↓	/	/
NH/PI Students	/	/	/	/	↑
Two or More Race Students	/	/	↓	/	/
Meal Status (Likelihood compared to Full Price)					
Direct Certification Students	↑				
Free Students	↑				
Reduced Students	↑				
Additional Schools	↑	↑	↑	↑	↑

↑=Increase ↓=Decrease /=No Change

Table 25. Likelihood of Being Proficient on ACT Aspire

	RLA	Math	Science
DPII Participants	↑	↑	↑
SPED Students	↓	↓	↓
ELL Students	↓	↓	↓
Race/Ethnicity (Likelihood compared to Whites)			
Asian Students	↑	↑	↑
Black Students	↓	↓	↓
Hispanic Students	↑	↑	/
NA/AN Students	↓	↓	↓
NH/PI Students	↓	↓	↓
Two or More Race Students	/	↓	↓
Meal Status (Likelihood compared to Full Price)			
Direct Certification Students	↓	↓	↓
Free Students	↓	↓	↓
Reduced Students	↓	↓	↓
Additional Schools	↓	↓	↓

↑=Increase ↓=Decrease /=No Change