



## **TOP Early Learning Centers Longitudinal Research Project Preliminary Report 2008-2016 SUMMARY**

### **TOP Data Collection**

To answer the question of whether high-quality, early education creates improved life outcomes for children living in poverty, we have collected data for nine years for the longitudinal research project that will follow TOP (The Opportunity Project) Early Learning Center graduates throughout their school years and into adulthood. For this report, teachers responded to surveys that compared the social skills in the areas of appropriate behavior, competent social interactions, and emotional maturity of TOP graduates (from kindergarten through fifth grades) with the remainder of students in their classrooms. To measure academic standing, we collected state standardized test scores from third through the eighth grades, and Grade Point Averages (GPAs), as well as suspensions for the middle school students. Special education placements were collected for all grades. Attitudinal data were collected on attendance and repeat discipline referrals for kindergarten through eighth grades; in addition, suspension rates were gathered for middle school students.

### **Social Skills Survey Data Analysis**

Social skills were measured on three dimensions: behavior, social interactions, and emotional maturity. More than 79% of TOP graduates ranked at or above the middle of their classes on all three measures. Furthermore, more than 33% of TOP graduates ranked in the top 20% of their classes in these dimensions.

## **Academics**

State standardized test (also known as Kansas Assessment Program or KAP) results for math and reading are presented for the 2015-2016 school year. TOP graduates' performances were compared to free and reduced lunch population results for Wichita Public Schools (USD 259) grades three through eight. Study results indicate that in a majority of cases, TOP graduates were less likely to perform below grade level and more likely to be at grade level and progressing toward college readiness than their USD 259 free and reduced lunch peers.

GPA's were collected for middle school students; TOP graduates' scores were compared to a demographically matched Control Group of USD 259 and Derby Public Schools (USD 260) students. Within a standard deviation, the three groupings performed similarly with GPA's of 3.0, 2.89 and 3.06 respectively.

A third academic measure for this study is special education placement. TOP graduates were 56% less likely than the demographically matched Control Group to be placed in special education in kindergarten through eighth grades.

## **Attitudinal Data**

With rare exception, the TOP children's attendance was better for each year, from kindergarten through eighth grade. For discipline, there was a consistent pattern indicating that TOP graduates often had fewer repeat discipline referrals each year. The overall trend for TOP graduates indicates a slow increase in discipline referral rates that reached a peak by sixth grade. From seventh to eighth grade, TOP graduate's repeat discipline rates went down by 12%. In contrast, the Control Group slowly increased their repeat discipline referrals from kindergarten through eighth grade, showing no signs of abatement. The gap between TOP graduates and the Control Group widened by eighth grade, providing evidence that the older TOP graduates' attitudes toward school improved whereas Control Group students' attitudes became more disenfranchised. Additionally, TOP graduates experienced similar suspension rates compared to the Control Group in sixth and seventh grades.

## **FINAL REPORT, 2008-2016**

**Marlene Schommer-Aikins, Professor  
Educational Psychology, Wichita State University**

The TOP Longitudinal Research Project has completed its ninth year and this year we collected data from students in kindergarten through the eighth grades in the Derby (USD 260) and Wichita (USD 259) school systems in Kansas. For the past year, the following information was collected: for all grades - attendance, special education placements, repeat discipline referrals, and grade retentions. In addition, we asked teachers of TOP graduates in kindergarten through fifth grades to respond to a social skills survey consisting of questions pertaining to behavior, social interactions, and emotional maturity. Academically, we collected standardized test information from the third through eighth grades in reading and mathematics (schools administer standardized state assessments annually starting at the third grade) for students enrolled in USD 259 for the 2015-2016 school year. GPAs and suspensions were also collected for both USD 259 and USD 260 students.

There were 1,364 students for which parents had signed consent forms (a 96% participant rate) agreeing that their children could participate in the study. Students who attended a TOP Early Learning Center for at least eight months prior to kindergarten and had a consent form signed by a parent, were deemed eligible for the study.

We were able to locate 1,130 of these children in the two school systems during the 2015-2016 school year. Table 1 provides the details of the numbers of students who were eligible for the study, the number of students we were able to locate, and the response rate for the social skills survey for the kindergarten through fifth grades. Both school systems had a 100% response rate from their teachers. Because the number of TOP graduates have increased substantially, beginning with the 2014-2015 school year, we began randomly selecting 150 newly graduated, eligible TOP students to participate in the study.

**Table 1**

**Grade of TOP Child, Number of Consent Forms, Percentage of Children Participating in the Longitudinal Study, Number of Students Located in Derby and Wichita Public Schools, Number of Surveys Received from Teachers, Percentage of Surveys Received, Percentage of Participation Overall for the 2015-2016 Year**

Grade	8th	7th	6th	5th	4th	3rd	2nd	1st	K	Totals
Total Eligible	51	114	152	149	175	204	273	154	155	1427
# of Consents	30	113	137	144	172	197	271	150	150	1364
% Participating	59%	99%	90%	97%	98%	97%	99%	97%	97%	96%
# of Students in USDs	22	83	87	99	142	161	233	153	150	1130
% of Students in USDs <sup>1</sup>	43%	73%	57%	66%	91%	79%	85%	99%	97%	79%
# of Surveys Requested				99	142	161	233	153	150	938
# of Surveys Received				99	142	161	233	153	150	938
% of Surveys Received <sup>2</sup>				100%	100%	100%	100%	100%	100%	100%

<sup>1</sup>Percentage of students who are eligible who are found in the Wichita and Derby school systems

<sup>2</sup>Percentage of surveys received out of number sent

### Data Analyses

The Data analyses addresses three areas in which children were either measured or data were gathered from school records.

1. We analyzed the teacher surveys in which teachers were asked to compare the social skills of TOP graduates with the other children in their classes. The first six tables that follow provide the mean scores for the TOP children on the three social skill variables (appropriate behavior, competent social interactions, and emotional maturity) for each grade, and then a test for statistical significance between TOP children and the other children in the class is presented in order to demonstrate that the TOP graduates' social skills from kindergarten through the fifth grades were significantly more mature than their non-TOP peers.
2. Second, the following analyses are provided on academic information:
  - a. Scores on reading and math standardized tests for grades three through eight are presented in terms of students' performance ratings (Level 1, a student is below grade level; Level 2, a student is at grade level, but not on track for college or career readiness; Level 3, a student is at grade level and on track for college or career readiness; Level 4, a student exceeds grade level expectations and is on

track for college or the workplace.) Figures 1 through 4 present the findings for the 2015-2016 school year.

- b. Cumulative Grade Point Averages for middle school students (sixth through eighth grades). Table 6 presents these data.
  - c. Special education placement for all grades is presented for the Wichita and Derby school districts separately; then the two districts are combined. Figures 5 and 6 depict the findings.
3. Analyses of attitudes are provided with the following information:
- a. Attendance is provided in terms of the percentage of time students attended school. Table 7 presents these data.
  - b. Discipline referrals are presented for those children who had repeated referrals to the principal's office. Table 8 indicates this analysis.
  - c. School suspensions are presented for the middle school students (sixth through eighth grades). Table 9 reports the results.

The standardized test analysis was conducted with TOP graduates (who were substantially free and reduced lunch qualified), comparing their average state assessment scores in reading and math to the average scores of students qualifying for free and reduced lunches in USD 259. Since these data sets are not available for GPA and special education placements nor attitudinal data, the (second and third) analyses were conducted with a control sample of 3,701 students (provided by Derby USD 260 and USD 269) matched with TOP graduates in age, gender, ethnicity, and socioeconomic status.

### **Teacher Surveys**

The teacher survey was revised three years ago and no longer addresses the individual child's social skills. The current survey asked the teacher to compare the TOP child to the remainder of the children in the TOP child's classroom on the three dimensions of social skills: appropriate behavior, competent social interactions, and emotional maturity. There were 12 questions that addressed the three dimensions of social skills (4 questions for each dimension). The teachers were asked to rate each TOP child in their class with a "1" if the child was in the

*bottom 20% of the class, with a “2” if the child was in the bottom half of the class, with a “3” if the child was at about the middle of the class, with a “4” if the child was in the top half of the class, and with a “5” if the child was in the top 20% of the class. We have four years of data for each grade from kindergarten through fifth grades.*

**Frequency scores and comparison data.** Scores were totaled and then averaged for each dimension. They were then divided by four, so there was a single score for each dimension from 1 to 5 (bottom 20% to top 20%). In that way, a statistical test comparison was possible in which to compare the TOP graduates to the remainder of the students in their classes to determine if their social skills were statistically higher. A score of “3” would signify an average score or the “middle of the class.” For simplicity, each dimension of the social skill is presented separately. Table 2a shows these results.

In order to have a better understanding of the percentage of students in each category, the four item mean scores were recoded into single categorical scores. Hence, means of 1.0 to 1.4 equaled category 1. Means of 1.5 to 2.4 equaled category 2. Means of 2.5 to 3.4 equaled category 3. Means of 3.5 to 4.4 equaled category 4. Means of 4.5 to 5.0 equaled category 5. The percentage of students in each category was than computed. Tables 2a, 3a, and 4a, provide these data.

**Table 2a**

**Mean Scores and Statistical Significance of Appropriate Behavior Scores of TOP Graduates Compared to the Children Who Score in About the Middle of the Class in the Appropriate Behavior Category, K-5<sup>th</sup> Grades (2008-2016)**

Grade	Number of Students	Mean Score	Standard Deviation	t Test	Statistical Significance
Kindergarten	482	3.93	.94	27.71	.000
First Grade	481	3.92	.92	21.51	.000
Second Grade	483	3.93	1.15	20.23	.000
Third Grade	360	3.89	1.01	16.65	.000
Fourth Grade	297	3.88	.94	16.20	.000
Fifth Grade	242	3.96	.96	15.60	.000

**Table 2b**

**Percentage of TOP Students in Each Appropriate Behavior Category, K-5<sup>th</sup> Grades (2008-2016)**

Grade	Category 1 In the bottom 20% of the class	Category 2 In the bottom half of the class	Category 3 At about the middle of the class	Category 4 In the top half of the class	Category 5 In the top 20% of the class
Kindergarten	.4	6.4	21.6	30.7	40.9
First Grade	.8	6.4	19.1	34.9	38.7
Second Grade	.6	9.7	19.7	25.1	44.9
Third Grade	1.4	8.1	20.3	27.2	43.1
Fourth Grade	.7	6.7	21.2	34.0	37.4
Fifth Grade	1.2	7.0	17.4	31.4	43.0

**Appropriate behavior.** The child’s ability to behave appropriately the majority of the time in a school environment is a predictor of his or her capability to adjust later in life to the rules of society (Webster-Stratton, Reid, & Hammond, 2004). Table 2a provides evidence that the majority of TOP children have learned this skill. The table also provides evidence, indicating that these differences are statistically significant.

In order to have a better understanding of the percentage of TOP students exceeding the average appropriate behavior of the non-TOP students, Table 2b presents the percentage of students in each of the five levels of behavior. Comparing TOP graduates to non-TOP students, the majority of TOP graduates were perceived by their teachers to be either in the upper half or upper 20% of their classes in terms of appropriate behavior. If, indeed, this is predictive, TOP students should be contributing members of society.

**Table 3a**

**Mean Scores and Statistical Significance of Competent Social Skills Scores of TOP Graduates Compared to the Children who Score in About the Middle of the Class in the Competent Social Skills Category, K-5<sup>th</sup> Grades (2008-2016)**

Grade	Number of Students	Mean Score	Standard Deviation	t Test	Statistical Significance
Kindergarten	481	3.87	.98	19.48	.000
First Grade	481	3.91	.95	21.05	.000
Second Grade	483	3.91	.99	20.24	.000
Third Grade	360	3.89	.97	17.56	.000
Fourth Grade	297	3.85	.96	15.38	.000
Fifth Grade	242	3.95	.96	15.26	.000

**Table 3b****Percentage of TOP Students in Each Competent Social Skills Category, K-5<sup>th</sup> Grades (2008-2016)**

Grade	Category 1 In the bottom 20% of the class	Category 2 In the bottom half of the class	Category 3 At about the middle of the class	Category 4 In the top half of the class	Category 5 In the top 20% of the class
Kindergarten	.8	7.1	23.9	28.1	40.1
First Grade	1.2	6.4	21.0	34.1	37.1
Second Grade	1.0	8.1	19.7	30.0	41.2
Third Grade	.8	7.5	20.3	31.4	40.0
Fourth Grade	1.3	7.7	20.2	35.4	35.4
Fifth Grade	.8	7.0	20.2	30.6	41.3

**Competent social interactions.** Learning how to get along socially also has predictive value in terms of building relationships and establishing capabilities of social activity (Elksnin & Elksnin, 2000). The High/Scope Perry Preschool Study found their participants were socially capable as early as age six (Schweinhart, Montie, Xiang, Barnett, Belfield, & Nores, 2005). Table 3b indicates that when comparing abilities of the TOP children to non-TOP students, the majority of TOP graduates were perceived by their teachers to be either in the upper half or upper 20% of their classes in terms of competent social interactions.

**Table 4a****Mean Scores and Statistical Significance of Emotional Maturity Scores of TOP Graduates Compared to the Children Who Score in About the Middle of the Class in the Emotional Maturity Category, K-5<sup>th</sup> Grades (2008-2016)**

Grade	Number of Students	Mean Score	Standard Deviation	t Test	Statistical Significance
Kindergarten	480	3.70	1.07	14.34	.000
First Grade	481	3.81	1.02	17.54	.000
Second Grade	483	3.82	1.07	16.86	.000
Third Grade	360	3.83	1.04	15.18	.000
Fourth Grade	297	3.75	1.00	12.90	.000
Fifth Grade	241	3.89	.97	14.35	.000



**Table 4b**

**Percentage of TOP Students in Each Emotional Maturity Category, K-5<sup>th</sup> Grades (2008-2016)**

<b>Grade</b>	<b>Category 1 In the bottom 20% of the class</b>	<b>Category 2 In the bottom half of the class</b>	<b>Category 3 At about the middle of the class</b>	<b>Category 4 In the top half of the class</b>	<b>Category 5 In the top 20% of the class</b>
Kindergarten	1.3	12.3	26.0	26.5	34.0
First Grade	.8	10.0	20.4	32.2	36.6
Second Grade	1.4	10.8	20.5	27.7	39.5
Third Grade	2.5	8.9	18.9	30.0	39.7
Fourth Grade	1.3	10.4	24.2	30.0	34.0
Fifth Grade	.8	7.1	20.3	34.4	37.3

**Emotional maturity.** The third and perhaps the most difficult social skill is that of emotional maturity. Waiting to take turns, asking “please” and saying “thank you” seem to require greater skills. Emotional maturity skills are predictive of future social abilities (Eisenberg, et al., 2007). It is the beginning of the ability to take the perspective of the other person. It helps nurture self-initiative, self-confidence, and autonomy. As shown in Table 4a, TOP students are statistically significantly more emotionally mature than their classmates.

Once again, TOP students are perceived by their teachers to be in either the upper half or upper 20% of their classes, as shown in Table 4b. There is growing substantiation that early education provides the basis for growing a healthy social being, that it manifests itself at kindergarten and continues throughout the elementary school years.

### **Academic Information**

Academics are presented as reading and math performance indicators from the KAP state assessments beginning at the third grade for the 2015-2016 school year. Also included in this section are the cumulative grade point averages (GPAs) for the middle school students (sixth through eighth grades). Special education is discussed as a subset of academics because it is generally considered part of the academic curriculum. For comparison purposes, average KAP scores of TOP graduates (who are substantially free and reduced lunch qualified) were compared to the average scores of free and reduced populations from USD 259. Since data for this population is not available for GPAs and special education placements, these two data sets

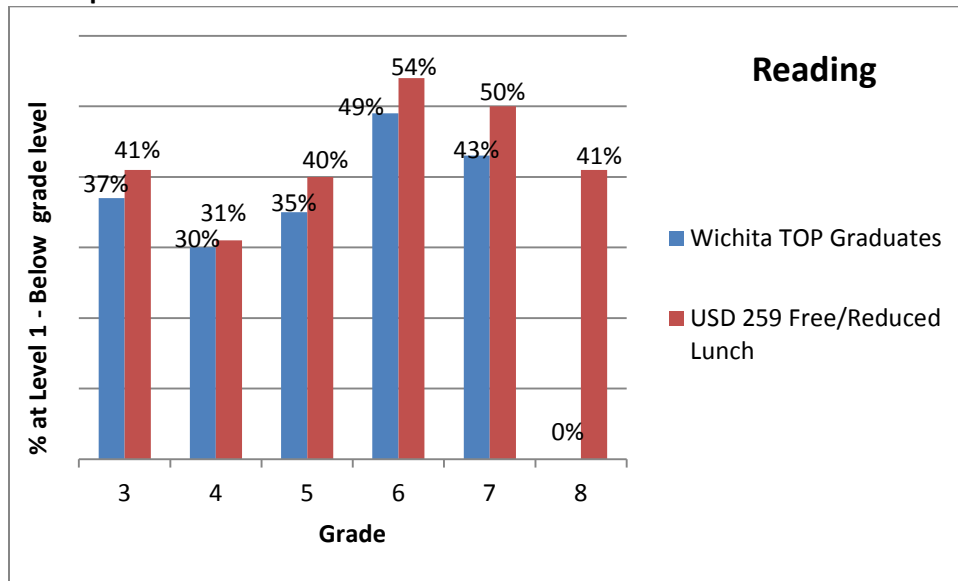
were compared to a Control Group comprised of children with matching socioeconomic makeup provided by USD 260 and USD 259 school districts.

**Standardized Test Scores.** Beginning with the third grade, schools administer state tests in several disciplines. For this report, we are concerned with test scores for reading and mathematics for the 2015-2016 school year. We have test scores for the third, fourth, fifth, sixth, seventh, and eighth grades. The state assessments rely primarily on a level of performance ranking (Level 1, 2, 3, or 4) relative to grade level peers in the same content area (reading and math). According to the information from the state assessment criteria, the four performance levels are: Level 1, a student below grade level; Level 2, a student is at grade level, but not on track for college or career readiness; Level 3, a student is at grade level and on track for college or career readiness; Level 4, a student exceeds grade-level expectations and is on track for college or the workplace.

For the purpose of this study, we are particularly interested in Level 1 (below grade level) and Level 3 (at grade level and on track for college or career readiness) as these segments signify educational failure or success. Figures 1-4, which follow, indicate the percentage comparison of Wichita TOP graduates and USD 259 free and reduced lunch population in reading and math. We also have subsequently calculated the likelihood comparisons for the groups for reading at Levels 1 and 3. This is shown in tables 5a through 5d.

**Figure 1**

**KAP Level 1 Performance Ratings in Reading for Wichita TOP Graduates Compared to Free and Reduced Lunch Populations at Wichita USD 259 for 2015-2016.**



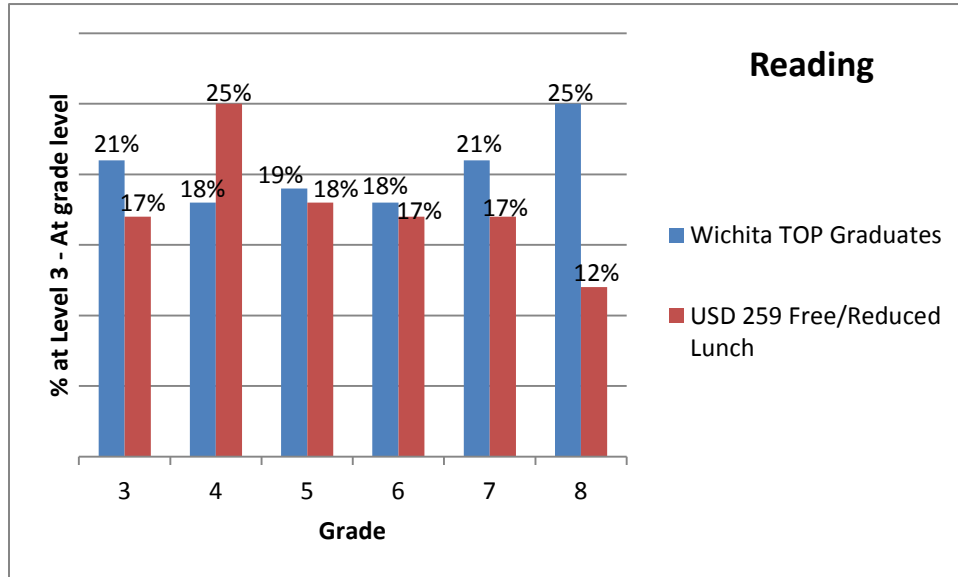
The Level 1 reading assessment data indicate that Wichita TOP graduates in every grade are less likely to perform below grade level.

**Table 5a**

Reading Assessments	
Grade	% less likely to fall below grade level
3 <sup>rd</sup>	10%
4 <sup>th</sup>	5%
5 <sup>th</sup>	13%
6 <sup>th</sup>	8%
7 <sup>th</sup>	13%
8 <sup>th</sup>	100%

**Figure 2**

**KAP Level 3 Performance Ratings in Reading for TOP Graduates in Grades Three Through Eight Compared With Free and Reduced Lunch Populations at Wichita USD 259 for the 2015-2016 School Year.**



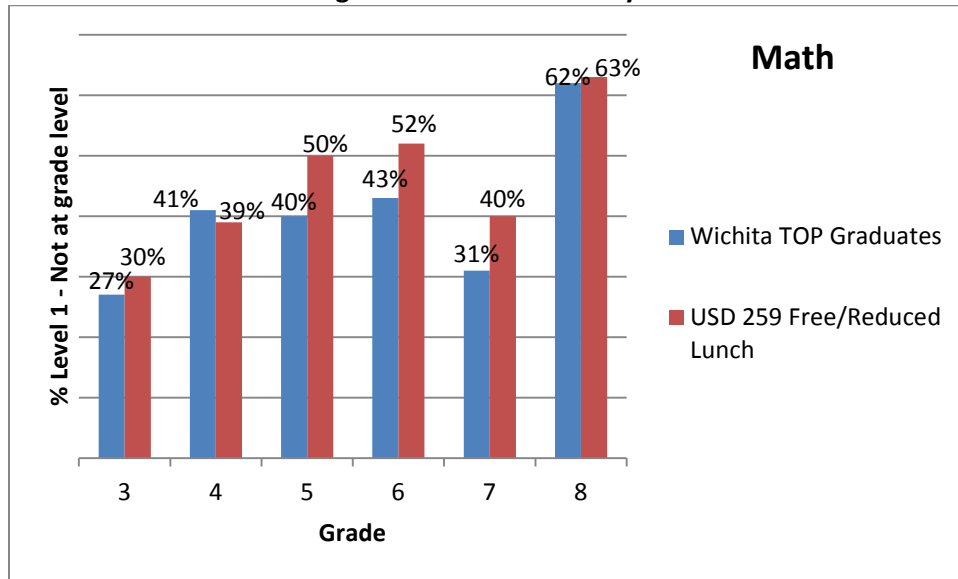
The Level 3 reading assessment data indicate that TOP graduates in five out of six grades are more likely to perform at grade level, progressing toward college readiness.

**Table 5b**

Level 3	Reading Assessments	
	Grade	% more or less likely to perform at grade level
	3 <sup>rd</sup>	19% more
	4 <sup>th</sup>	25% less
	5 <sup>th</sup>	3% more
	6 <sup>th</sup>	8% more
	7 <sup>th</sup>	27% more
	8 <sup>th</sup>	107% more

**Figure 3**

**KAP Level 1 Performance Ratings in Math for Wichita TOP Graduates Compared to Free and Reduced Populations for Wichita USD 259 during the 2015-2016 school year.**



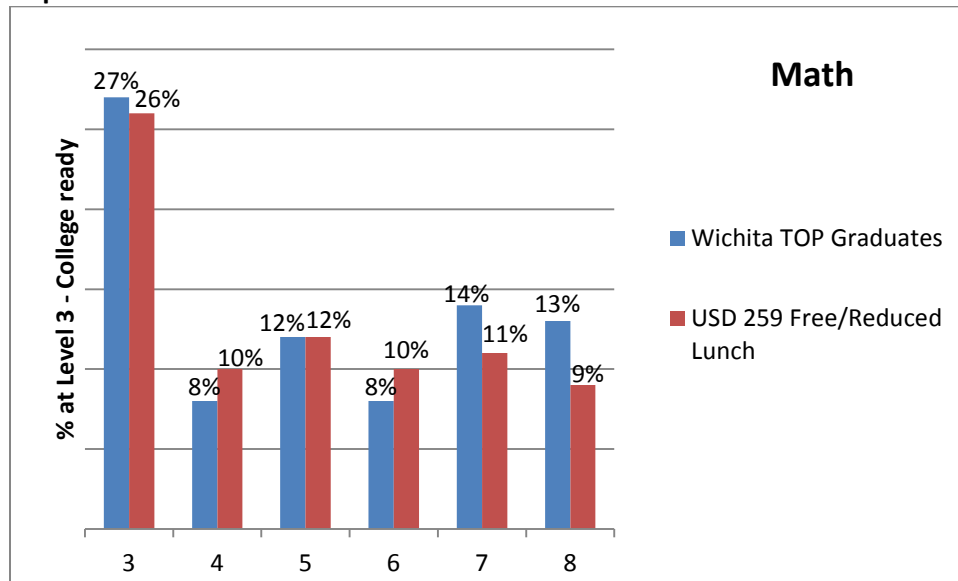
The Level 1 math assessment data indicate that TOP graduates for five out of six grades are less likely to perform below grade level than Wichita USD 259 children enrolled in the free or reduced lunch programs

**Table 5c**

Level 1	Math Assessments	
	Grade	% more or less likely to fall below grade level
	3 <sup>rd</sup>	9% less
	4 <sup>th</sup>	6% more
	5 <sup>th</sup>	19% less
	6 <sup>th</sup>	17% less
	7 <sup>th</sup>	22% less
	8 <sup>th</sup>	0.3% less

**Figure 4**

**KAP Level 3 Performance Ratings in Math for TOP Graduates in Grades Compared With Free and Reduced Lunch Populations at Wichita USD 259 for the 2015-2016 School Year.**



The Level 3 math assessment data indicate that TOP graduates in three out of six grades are more likely to perform at grade level.

**Table 5d**

Level 3	Math Assessments	
	Grade	% more or less likely to fall below grade level
	3 <sup>rd</sup>	4% more
	4 <sup>th</sup>	23% less
	5 <sup>th</sup>	3% less
	6 <sup>th</sup>	18% less
	7 <sup>th</sup>	31% more
	8 <sup>th</sup>	39% more

Overall TOP graduates scored favorably on reading and math on KAP assessments for the 2015-2016 school year. On Level 1 measures (the likelihood of a child performing below grade level) in reading, TOP graduates tested less likely in all six grades when compared to children from the USD 259 free and reduced lunch population. On Level 3 measures (the likelihood of a child performing at grade level and progressing toward college readiness) in reading, TOP graduates tested more likely in five of six grades tested when compared to the USD 259 free and reduced lunch population. Whereas, on Level 1 math measures, TOP graduates tested less likely to perform below grade level in five of six grades when compared to

children from the USD 259 free and reduced lunch population. On Level 3 math measures, TOP graduates tested more likely to perform at grade level in three of six grades tested when compared to the USD 259 free and reduced lunch population.

**Cumulative GPA scores.** Academic cumulative grade point averages were gathered from the two school districts for the sixth and seventh grade TOP and Control Group students. Table 6 reports these averaged GPAs for each district and for the districts combined.

**Table 6**

**Cumulative Grade Point Averages for Sixth Through Eighth Grade Students for Wichita and Derby TOP and Control Group Students for the 2015-2016 School Year**

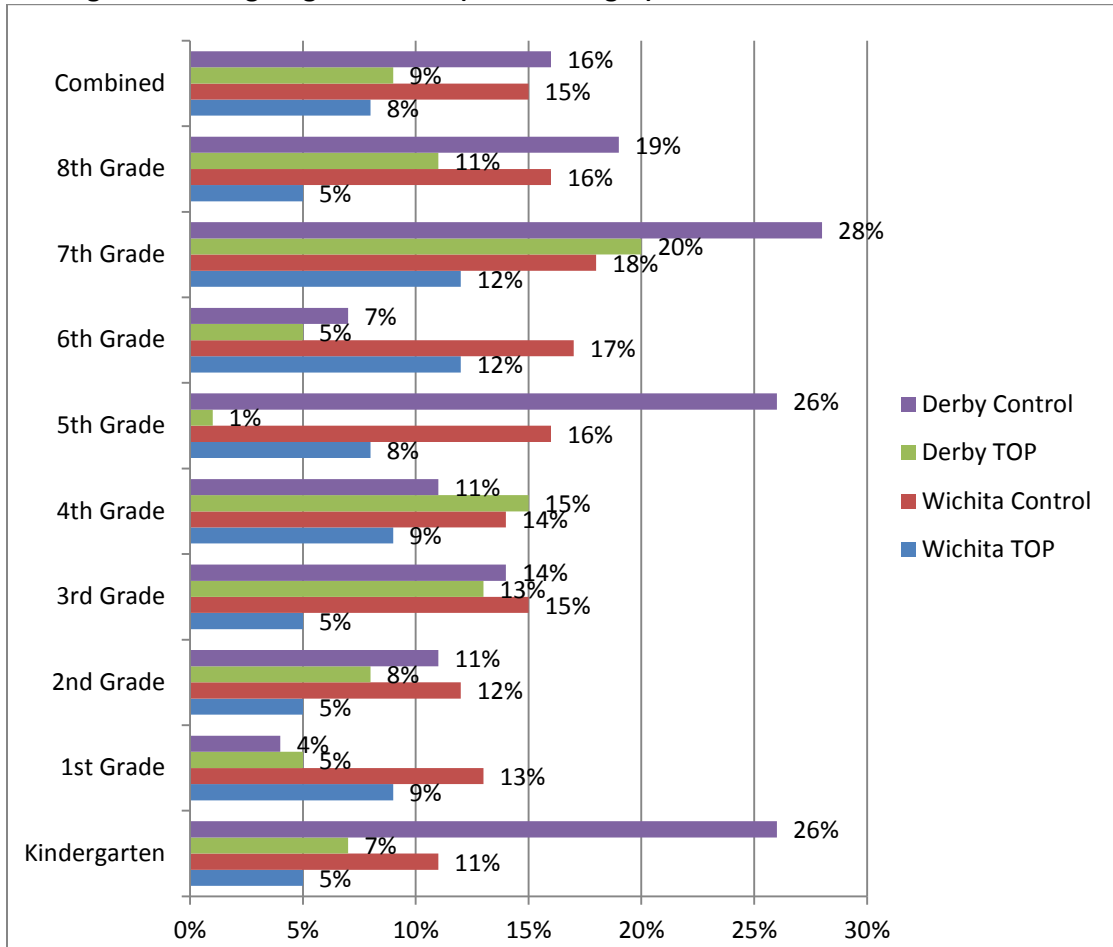
Grade	Wichita				Derby				Combined			
	TOP		Control		TOP		Control		TOP		Control	
	No.	GPA	No.	GPA	No.	GPA	No.	GPA	No.	GPA	No.	GPA
Sixth	50	2.91	240	2.99	21	3.08	46	3.31	71	3.00	286	3.15
Seventh	42	3.10	191	2.75	20	2.94	46	3.24	62	3.02	237	3.00
Eighth	8	3.37	32	2.97	10	2.51	17	2.76	18	2.94	49	2.87
<b>Total</b>	<b>100</b>	<b>3.0</b>	<b>463</b>	<b>2.89</b>	<b>51</b>	<b>2.92</b>	<b>109</b>	<b>3.19</b>	<b>151</b>	<b>3.0</b>	<b>572</b>	<b>3.06</b>

When observing the Wichita district, it is interesting to note that, for seventh and eighth grades, the TOP students, on average, had at least a 3.0 GPA whereas their Control peers did not achieve a 3.0. Derby TOP students, however, did not surpass their Control peers' grade point averages. When GPAs for the districts were combined, TOP graduates exceeded their Control peers for two of the three grade years reported (seventh and eighth grades).

**Special education placement.** Because the sample sizes are so different for the two groups, percentages are used to report on special education placements. Figure 5 indicates these percentages for each school system separately. For the TOP students, almost all the special education placements were for speech and/or language problems. For the Control Groups, there was considerable variation in the reasons for special education placements.

**Figure 5**

**Special Education Placements for the Wichita and Derby TOP and Control Group Students from Kindergarten Through Eighth Grades (in Percentages) for the 2015-2016 School Year**

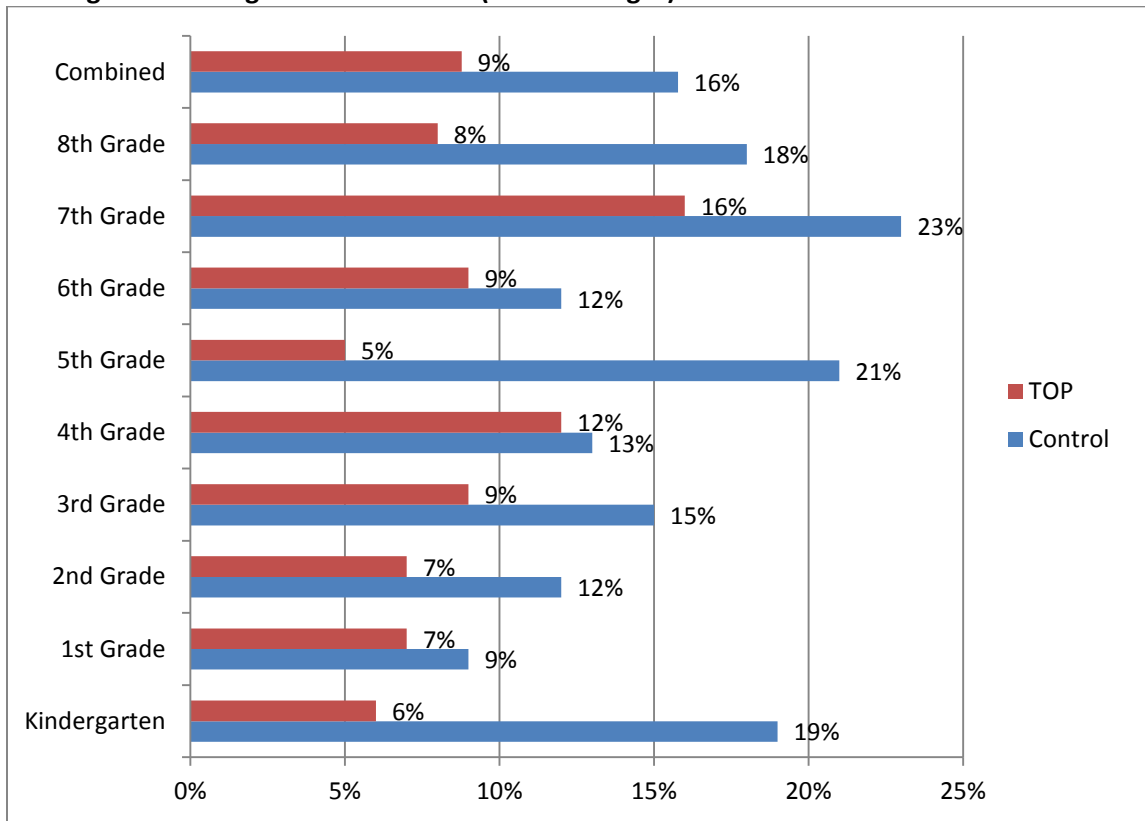


For Wichita, the TOP students had fewer special education placements at all grades than their Control Group peers; the Derby TOP students had fewer special education placements compared to the Control Group peers for all grades with the exception of fourth grade, with a four percent difference and first grade with a one percent difference.



**Figure 6**

**Special Education Placements for the Combined Districts for TOP and Control Groups from Kindergarten Through Seventh Grades (in Percentages) for the 2015-2016 School Year**



When the two districts are combined, the percentages become more noticeable because the numbers are larger. For each year, TOP students had a lower percentage of special education placements than their Control Group peers. Figure 6 indicates these percentages. When all grades are combined, TOP graduates are 44% less likely to need special education services.

**Attitudinal Information**

We operationally defined attendance and discipline as attitude variables because earlier longitudinal studies (e.g., Schweinhart et al., 2005) indicated that attitudes toward school may be an important variable in addressing differences between groups of this nature. Thus, we collected attendance rates and discipline referrals from the schools to determine students' attitudes toward schools.

The Derby and Wichita school districts provided the TOP Longitudinal Study with a control sample matched to the TOP children in terms of age, gender, ethnicity, and socioeconomic status, with which to compare the TOP children for purposes of attitudinal, GPA and special education placement comparisons. Thus, the demographic data is reported on TOP students who attended schools in those two districts from kindergarten through the seventh grades, comparing them with the matched Control Groups. The demographic information is presented separately for each district, and then combined to provide an overall comparison of TOP with the Control Groups.

**School attendance.** The first few years of reports indicated few differences in attendance between the TOP students and their Control peers. However, the last three years have indicated interesting findings: In 2013, we found that, although there continued to be few differences between kindergarten, first, and second grade children in their school attendance (whether or not they were TOP graduates), as they became older, there was a change. In other words, as the TOP children got older their days of absenteeism decreased. They attended school more often than their non-TOP peers. In 2014, we found an interesting factor; when the data are aggregated for both school districts, there were fewer absences each year until the students reached middle school. In 2015, there were three interesting findings: First, from kindergarten through second grades, TOP students had a higher attendance rate than their Control Group peers. Second, for third and fourth grades, TOP students had a lower attendance rate than the Control Group. Third, for the sixth and seventh grades, TOP students again had a higher attendance rate than their Control Group cohorts.

In the current year (2016) the TOP students averaged a 96% attendance rate. More often than not, they surpassed the attendance rate of their Control Group peers. By the eighth grade, TOP students were one and a half percent more likely to attend classes than their Control Group peers. In other words, TOP graduates exhibited an absentee rate that was 15% less than the control group. We may have to wait until these students get into high school to determine what this increase indicates. Table 7 provides the data for both the Wichita and Derby schools separately and then the two districts combined.

**Table 7**

**Average Attendance Rates (in Percentages) for Wichita and Derby TOP and Control Group Students from Kindergarten Through Eighth Grades for the 2015-2016 School Year**

Grade	Wichita				Derby				Combined			
	TOP		Control		TOP		Control		TOP		Control	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Kindergarten	107	95.9	700	93.9	28	96.8	86	95.9	135	96.35	786	94.90
First Grade	101	95.8	613	95.1	20	96.8	71	96.6	121	96.30	684	95.85
Second Grade	150	96.0	521	94.6	49	96.7	74	97.0	199	96.35	595	95.80
Third Grade	97	95.8	344	95.5	30	98.0	29	96.9	127	96.90	373	96.20
Fourth Grade	87	95.1	332	95.9	33	97.2	25	96.8	120	96.15	357	96.35
Fifth Grade	52	94.9	270	95.3	28	96.2	55	95.9	80	95.55	325	95.60
Sixth Grade	50	94.8	240	94.8	19	95.4	44	95.6	69	95.10	284	95.20
Seventh Grade	42	96.1	192	93.1	20	94.5	46	95.7	62	95.30	238	94.40
Eighth Grade	8	94.0	33	94.2	9	94.4	26	91.4	17	94.20	59	92.80
Total	694		3245		236		456		930		3701	
Weighted Averages										96.12		95.51

**Discipline Referrals.** We also obtained data on discipline - if a child was referred to the office because of behavior problems and if there were repeated discipline referrals for the same child. Generally, if a child is sent to the office one time, there may be many reasons besides misbehavior. Therefore, we decided that we would only count repeat office visits as a means disciplines referrals. In Wichita, the TOP graduates had fewer repeat office referrals for four out of nine grades. In Derby, the TOP students had fewer repeats in five of nine grades. The combined scores of both districts suggest that there is an increase in discipline referrals in middle school in both the control and TOP students. Between the seventh and eighth grades, there was a 12% decrease in TOP students’ attitudes of disenfranchisement compared to a five percent increase for the Control Group. Because the groups differ substantially in size, the numbers are reported in percentages. Table 8 provides the percentages for the Wichita and Derby students separately, and then the two groups are combined for each grade.

**Table 8**

**Repeat Discipline Referrals Rates (in Percentages) for TOP and Control Group Students From Kindergarten Through Eighth Grades for Wichita and Derby for the 2015-2016 School Year**

Grade	Wichita		Derby		Combined	
	TOP	Control	TOP	Control	TOP	Control
Kindergarten	5%	4%	0%	2%	3%	3%
First Grade	9%	5%	0%	1%	5%	3%
Second Grade	5%	6%	1%	3%	3%	5%
Third Grade	3%	7%	7%	1%	5%	4%
Fourth Grade	9%	3%	0%	0%	5%	2%
Fifth Grade	8%	7%	11%	13%	10%	10%
Sixth Grade	16%	15%	29%	22%	23%	19%
Seventh Grade	14%	21%	30%	22%	22%	22%
Eighth Grade	0%	12%	20%	41%	10%	27%

**Middle School Information**

**School suspensions.** Because we do not seek survey data from teachers of students beyond the fifth grade, we asked for some additional information about students as they advanced to middle school. We asked for disciplinary information regarding suspensions and expulsions of the sixth, seventh, and eighth grade students. Neither Derby nor Wichita reported any expulsions for the three grades. Table 9 provides the suspension percentages for both school districts.

**Table 9**

**Suspension Rates (in Percentages) for Sixth Through Eighth Grade Students for Wichita and Derby TOP and Control Group Students for the 2015-2016 School Year**

Grade	Wichita		Derby		Combined	
	TOP	Control	TOP	Control	TOP	Control
Sixth	16%	24%	10%	0%	13%	12%
Seventh	24%	27%	15%	10%	20%	19%
Eighth	25%	24%	45%	26%	35%	25%

Looking at the combined scores for the two districts, it appears that in the sixth and seventh grades, there are a similar percentage of suspensions for TOP and Control Group students with an increase for both the TOP and the Control Group by eighth grade.

## Summary

### Social Skills

Learning social skills early in life is predictive of children's ability to adjust to society and be productive members of their culture (Elksnin & Elksnin, 2000; Webster-Stratton & Reid, 2004). There are now nine years of evidence that the TOP Early Learning Centers have provided a means for this to occur. TOP children have shown ability to behave appropriately, to establish social relationships, to engage in social interactions, and to provide evidence of emotional maturity. When comparing TOP graduates with other children in their classes, they behave significantly better than their peers; they have significantly more competent social interactions, and are more emotionally mature than their peers from kindergarten through the fifth grades. Not only does this evidence begin at kindergarten; it grows, develops, and matures, such that it is even more noticeable by the fifth grade when the students are leaving elementary school. Overall, the majority of TOP graduates were either in the upper 50% of their class or the top 20% of their class in all grades and all categories. They seem socially adept and prepared to meet the challenges of middle school.

### Academics

**Standardized Test Scores.** Beginning in third grade the Kansas State Department of Education administers standardized reading and math assessments. For this report, the data for the 2015-2016 school year have been employed. To avoid economic gap variables, we compare Wichita TOP graduates' performances (nearly all TOP students qualify for free and reduced lunches) with published test results for USD 259's free and reduced lunch population. Under these comparisons, TOP graduates performed favorably. TOP graduates were less likely to perform below grade level in all six grades tested in reading and in five of six grades in math. Similarly, TOP graduates were more likely to be at grade level and progressing to college readiness in five of six grades tested in reading and three of six grades tested in math.

**Cumulative grade point averages.** GPAs were also collected for the middle school students; TOP graduates and the Control Group, on average, consistently indicated at or near a

3.0 GPA. In seventh and eighth grade, the TOP graduates exceeded their Control Group peers GPAs.

**Special education placement.** When data are examined for both school districts, TOP graduates were less likely than the Control Group to be placed in special education through eighth grade. The eighth grade TOP cohort had an eight percent special education placement rate compared to 18% for their Control Group peers. This represents a 56% reduction in eighth grade special education placements for TOP grads. Similarly, when all grades were combined, TOP graduates had a nine percent special education rate compared to 16% for the Control Group; this represents 44% fewer special education placements than the Control Group.

### **Attitudes**

In terms of attendance, TOP children's attendance was high for each year; from kindergarten through eighth grade. By eighth grade they had one and a half percent more days of attendance than their Control Group peers. Schweinhart, et al. (2005) indicated from their longitudinal study of the High/Scope Perry Preschool Study that one factor found early in their target group was the favorable attitude toward school. It seems as if our TOP group has found just that attitude toward school.

In addition, when addressing discipline problems, repeat discipline referrals indicate that TOP graduates have dramatic drop by the time they reach eighth grade (from seventh to eighth grade there was a 12% drop for TOP and a five percent increase for the Control Group), providing evidence that the older TOP graduates' attitudes toward school improved whereas Control Group students' attitudes became more disenfranchised. For the middle school students, we also collected data on suspensions; the pattern for both TOP and control students is similar with higher rates of suspensions as they reach the eighth grade.

## Conclusions

After nine years of data collection, with the addition of a new group of kindergarten children from TOP each year, we have both a longitudinal and yearly perspective on the effect of a high-quality early education program in terms of long-term outcomes. We can assert with increasing confidence that, for each grade, TOP graduates' social skills are statistically greater than their classmates; that their attitudes, indicated by their attendance and repeat discipline referrals are better than their Control peers. We can also note that academically, in terms of mathematics and reading, and by GPAs for middle school students, that TOP graduates outperform comparable students and Control Groups. Thus, at least through the eighth grade, there are long-term benefits to a quality early education program.

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