



TOP Early Learning Centers Longitudinal Research Project Preliminary Report 2008-2017 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 10 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 and high school 9th graders. Special education placements were collected for all grades. Attitudinal data were collected on attendance and repeat discipline referrals for kindergarten through ninth grades; in addition, suspension rates were gathered for middle school students and high school 9th graders.

Social Skills Survey Data Analysis

Social skills were measured on three dimensions: behavior, social interactions, and emotional maturity. More than 85% of TOP graduates ranked at or above the middle of their classes on all three measures combined. Furthermore, more than 38% of TOP graduates ranked in the top 20% of their classes in these combined dimensions.

Academics

State standardized test (also known as Kansas Assessment Program or KAP) results for math and reading are presented for the 2016-2017 school year. TOP graduates' performances

were compared to a demographically matched Control Group for Wichita Public Schools (USD 259) and for Derby Public Schools (USD 260) grades three through eight (ninth graders do not take state assessments). 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 the children in the demographically matched USD 259 and USD 260 Control Group students.

Grade Point Averages were collected for middle school students and for high school 9th graders; TOP graduates' scores were also compared to the USD 259 and USD 260 Control Group students. When GPAs for the districts were combined, TOP graduates had comparable GPAs to their Control Group peers.

A third academic measure for this study is special education placement. TOP graduates were 38% less likely than the Control Group to be placed in special education in kindergarten through ninth grades.

Attitudinal Data

With rare exception, the TOP children's attendance was better for each year, from kindergarten through ninth 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 1%. 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 ninth 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 through ninth grades.

FINAL REPORT, 2008-2017

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The TOP Longitudinal Research Project has completed its tenth year and this year we collected data from students in kindergarten through the ninth 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 and USD 260 for the 2016-2017 school year. Grade Point Averages (GPA) and suspensions were also collected for both USD 259 and USD 260 students.

There were 1,514 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 1,221 of these children in the two school systems during the 2016-2017 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 has 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 Children, 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 2016-2017 Year

Grade	9th	8th	7th	6th	5th	4th	3rd	2nd	1st	K	Totals
Total Eligible	51	114	152	149	175	204	273	154	155	150	1577
# of Consents	30	113	137	144	172	197	271	150	150	150	1514
% Participating	59%	99%	90%	97%	98%	97%	99%	97%	97%	100%	96%
# of Students in USDs	18	76	91	89	120	157	220	150	150	150	1221
% of Students in USDs ¹	35%	67%	60%	60%	69%	77%	81%	97%	97%	100%	77%
# of Surveys Requested					120	157	220	150	150	150	947
# of Surveys Received					120	157	233	150	150	150	947
% of Surveys Received ²					100%	100%	100%	100%	100%	100%	100%

¹Percentage of students who are eligible who are found in the Wichita and Derby school systems

²Percentage of surveys received out of number sent

Data Analyses

The data analyses address 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 for 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 2016-2017 school year.

- b. Cumulative Grade Point Averages for sixth through ninth 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 sixth through ninth grades. Table 9 reports the results.

The first analysis was conducted with TOP participants who were compared with the remainder of the children in their class. The second and third analyses were conducted with a control sample provided by the Derby and Wichita school districts.

Teacher Surveys

The teacher survey was revised four 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 then 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-5th Grades (2008-2017)

Grade	Number of Students	Mean Score	Standard Deviation	t Test	Statistical Significance
Kindergarten	587	3.89	1.01	21.35	.000
First Grade	582	3.85	.95	21.58	.000
Second Grade	582	3.84	.92	22.03	.000
Third Grade	504	3.99	.99	22.45	.000
Fourth Grade	394	3.92	.85	21.48	.000
Fifth Grade	326	3.91	1.02	16.12	.000

Table 2b

Percentage of TOP Students in Each Appropriate Behavior Category, K-5th Grades (2016-2017)

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	0	4.8	28.8	25.0	41.3
First Grade	0	9.9	21.8	36.6	31.7
Second Grade	0	6.1	28.6	37.8	27.6
Third Grade	0	8.3	18.1	20.1	53.5
Fourth Grade	0	5.2	18.6	39.2	37.1
Fifth Grade	0	8.5	22.0	26.8	42.7

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-5th Grades (2008-2017)

Grade	Number of Students	Mean Score	Standard Deviation	t Test	Statistical Significance
Kindergarten	587	3.84	1.04	19.57	.000
First Grade	582	3.83	.92	21.76	.000
Second Grade	582	3.88	1.08	19.66	.000
Third Grade	504	3.96	1.00	21.56	.000
Fourth Grade	394	3.95	.86	21.93	.000
Fifth Grade	326	3.95	1.00	17.15	.000

Table 3b**Percentage of TOP Students in Each Competent Social Skills Category, K-5th Grades (2016-2017)**

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	0	0	29.8	25.5	44.7
First Grade	0	0	18.4	48.3	33.3
Second Grade	0	0	22.3	47.9	29.8
Third Grade	0	0	23.1	28.4	48.5
Fourth Grade	0	0	14.0	41.9	44.1
Fifth Grade	0	0	21.3	30.7	48.0

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, all of the TOP graduates for whom this survey was completed 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-5th Grades (2008-2017)**

Grade	Number of Students	Mean Score	Standard Deviation	t Test	Statistical Significance
Kindergarten	587	3.64	1.10	14.10	.000
First Grade	582	3.71	.99	17.30	.000
Second Grade	582	3.72	1.08	16.08	.000
Third Grade	504	3.87	1.08	18.08	.000
Fourth Grade	394	3.80	.99	16.04	.000
Fifth Grade	326	3.81	1.13	12.94	.000

Table 4b

Percentage of TOP Students in Each Emotional Maturity Category, K-5th Grades (2016-2017)

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	2.9	14.3	23.8	28.6	30.5
First Grade	2.0	8.9	29.7	29.7	29.7
Second Grade	1.0	15.0	22.0	31.0	31.0
Third Grade	1.4	10.4	17.4	27.8	43.1
Fourth Grade	0	12.2	19.4	31.6	36.7
Fifth Grade	3.6	10.7	23.8	22.6	29.3

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 in kindergarten and continues throughout the elementary school years.

Academic Information

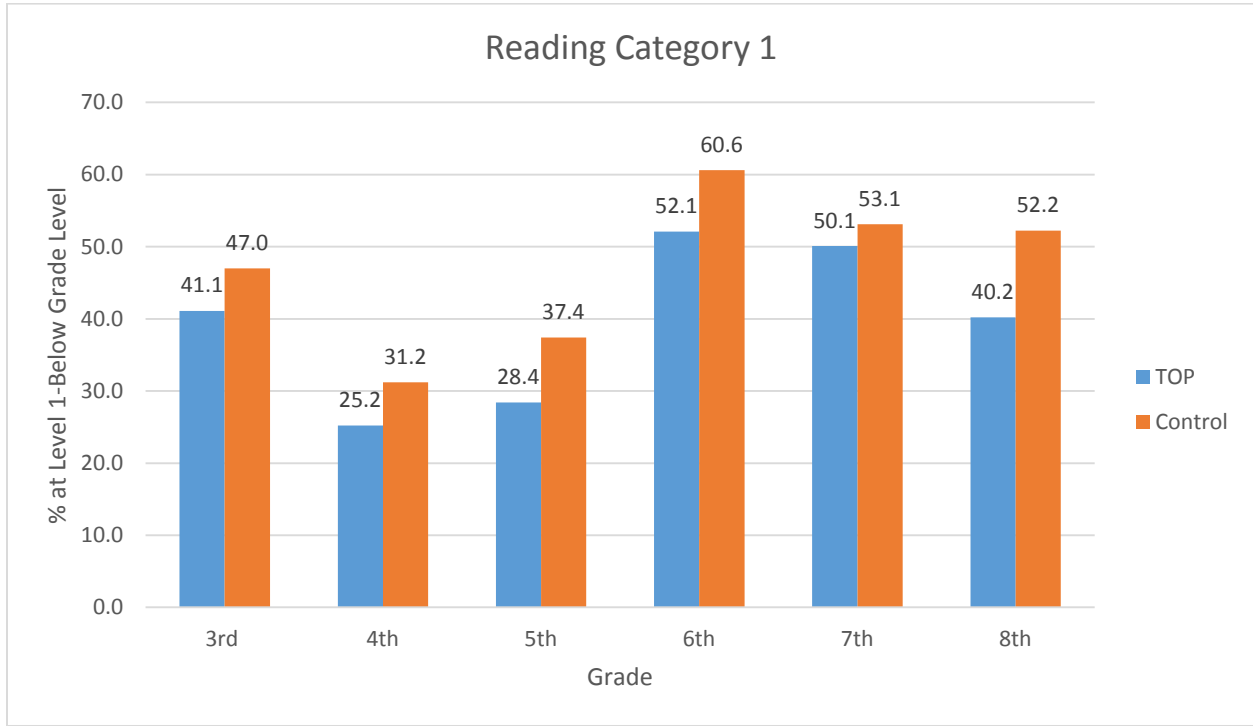
Academics are presented as reading and math performance indicators from the Kansas Assessment Program (KAP) state assessments beginning in the third grade for the 2016-2017 school year. Also included in this section are the cumulative GPAs for the middle school students (sixth through eighth grades) and high school students (ninth grade). Special education is discussed as a subset of academics because it is generally considered part of the academic curriculum. Both districts provided a demographically matched Control Group with which we could compare the TOP graduates in both academic subjects and in Special Education placements.

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 2016-2017 school year. We have test scores for the third, fourth, fifth, sixth, seventh, and eighth grades (state assessments are not administered to ninth graders). 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 the Control Group in USD 259 and USD 260 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 Control Populations in USD 259 and USD 260 for 2016-2017



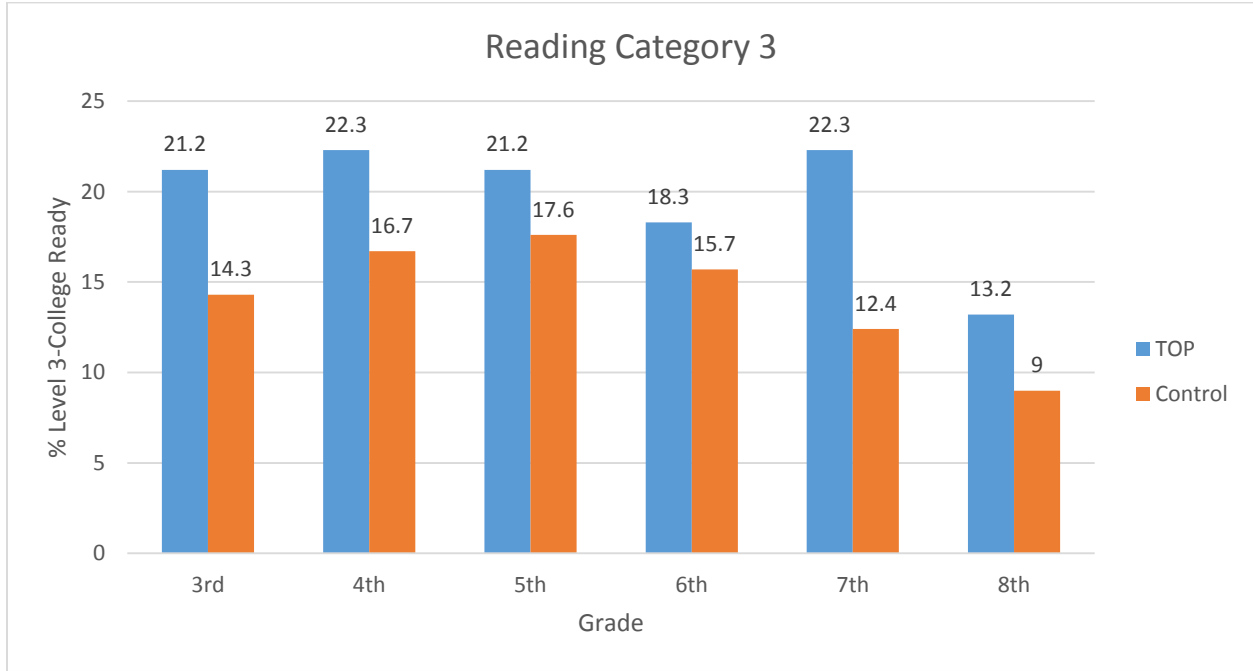
The Level 1 reading assessment data indicate that Wichita TOP graduates in six out of six grades are less likely to perform below grade level.

Table 5a

Reading Assessments	
Grade	% more or less likely to fall below grade level
3 rd	13% less
4 th	19% less
5 th	24% less
6 th	14% less
7 th	6% less
8 th	23% less

Figure 2

KAP Level 3 Performance Ratings in Reading for Wichita TOP Graduates Compared to Control Populations in USD 259 and USD 260 for 2016-2017



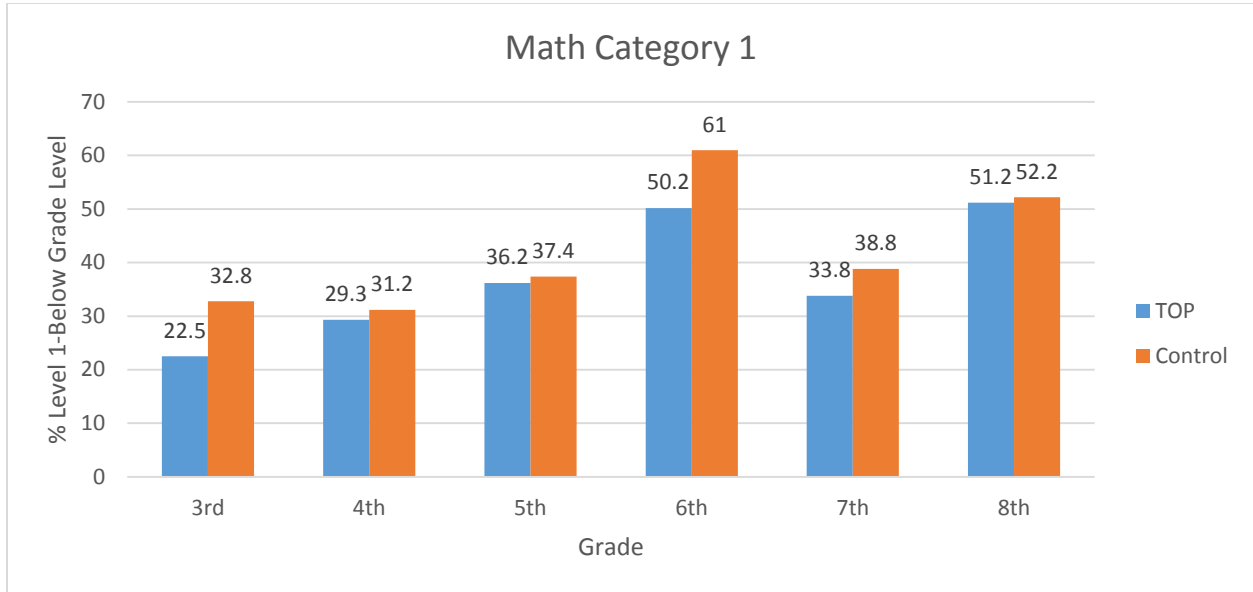
The Level 3 reading assessment data indicate that TOP graduates in six out of six grades are more likely to perform at grade level, progressing toward college readiness.

Table 5b

Level 3	Reading Assessments	
	Grade	% more or less likely to perform at grade level
	3 rd	48% more
	4 th	33% more
	5 th	20% more
	6 th	17% more
	7 th	80% more
	8 th	47% more

Figure 3

KAP Level 1 Performance Ratings in Math for Wichita TOP Graduates Compared Control Populations in USD 259 and USD 260 for 2016-2017



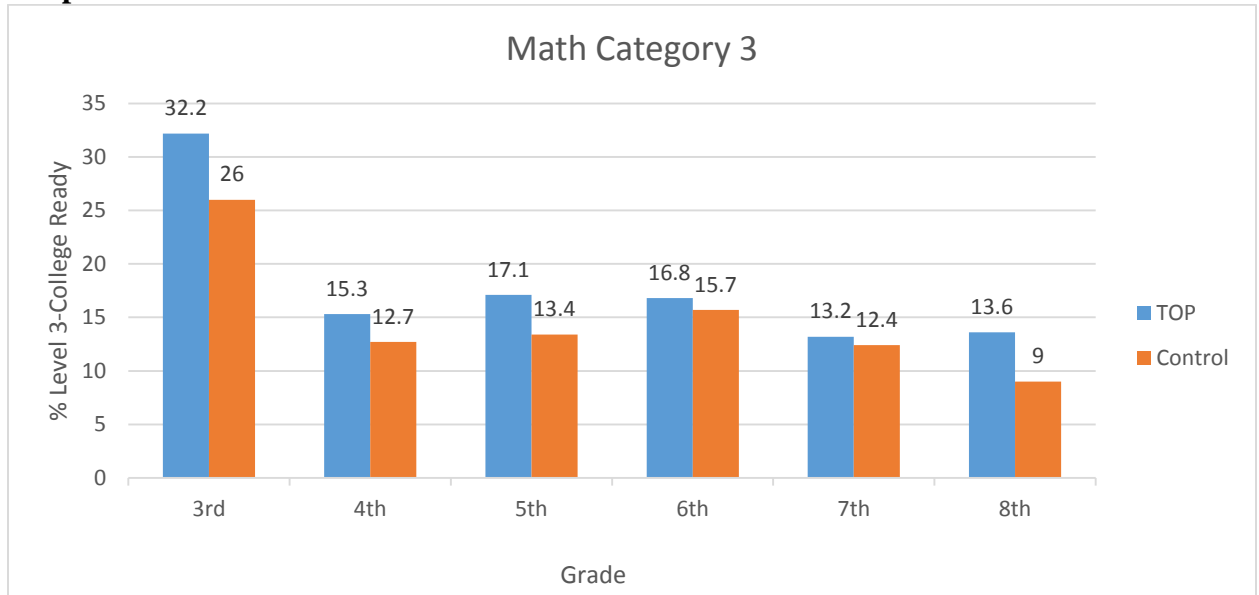
The Level 1 math assessment data indicate that TOP graduates for six out of six grades are less likely to perform below grade level than Control Group children.

Table 5c

		Math Assessments	
		Grade	% more or less likely to fall below grade level
Level 1		3 rd	31% less
		4 th	6% less
		5 th	3% less
		6 th	17% less
		7 th	13% less
		8 th	2% less

Figure 4

KAP Level 3 Performance Ratings in Math for Wichita TOP Graduates Compared Control Populations in USD 259 and USD 260 for 2016-2017



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

Table 5d

Level 3	Math Assessments	
	Grade	% more or less likely to perform at grade level
	3 rd	24% more
	4 th	20% more
	5 th	28% more
	6 th	7% more
	7 th	6% more
	8 th	51% more

Overall TOP graduates scored favorably on reading and math on KAP assessments for the 2016-2017 school year. On Level 1 measures (the likelihood of a child performing below grade level) in reading, TOP graduates tested less likely in six of the six grades when compared to children from the USD 259 and USD 260 Control Group. 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 six of six grades tested when compared to the USD 259 and USD

260 Control Group. Whereas, on Level 1 math measures, TOP graduates tested less likely to perform below grade level in six of six grades when compared to children from the USD 259 and USD 260 Control Group. On Level 3 math measures, TOP graduates tested more likely to perform at grade level in six of six grades tested when compared to the USD 259 and USD 260 Control Group.

Cumulative GPA scores. Academic cumulative grade point averages were gathered from the two school districts for the sixth through ninth 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 Ninth Grade Students for Wichita and Derby TOP and Control Group Students for the 2016-2017 School Year

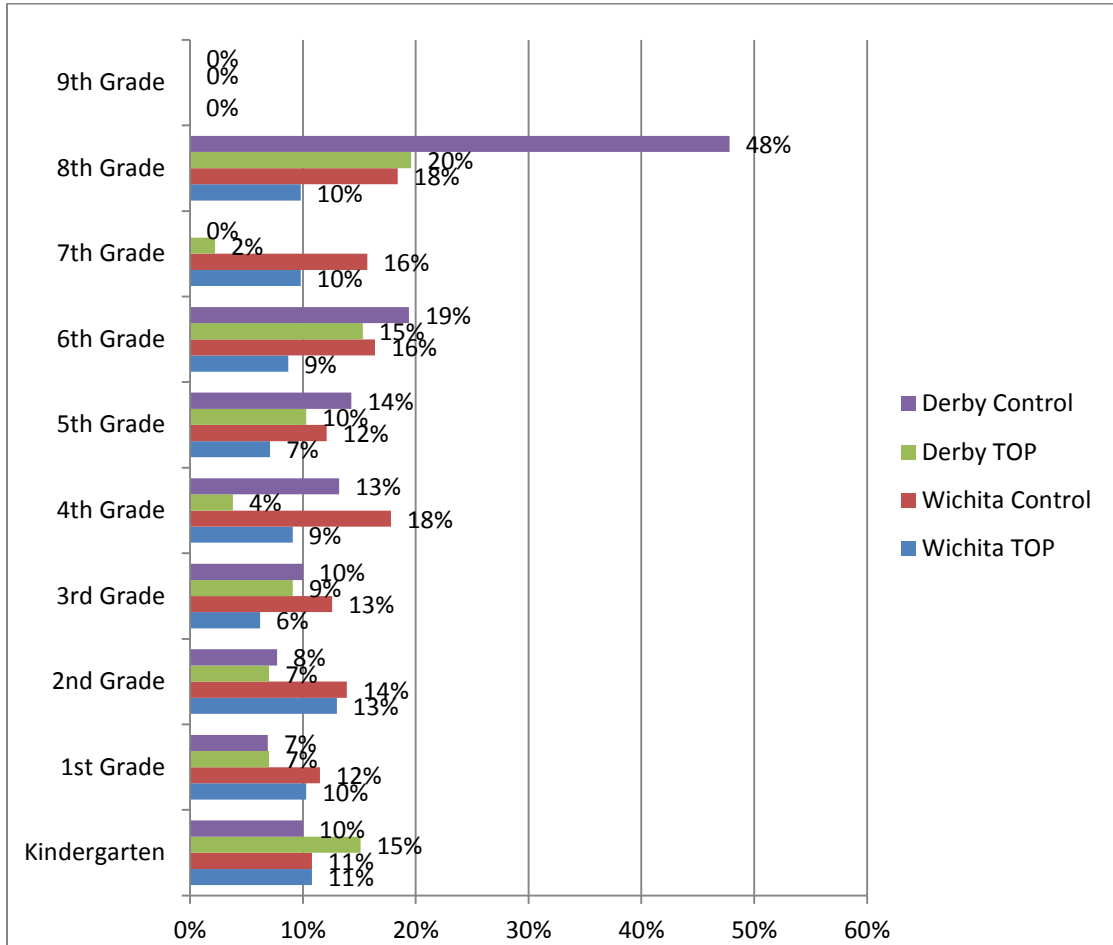
Grade	Wichita				Derby				Combined			
	TOP		Control		TOP		Control		TOP		Control	
	No.	GPA	No.	GPA	No.	GPA	No.	GPA	No.	GPA	No.	GPA
Sixth	46	3.0	240	2.99	21	3.08	46	3.31	67	3.04	286	3.15
Seventh	41	2.67	191	2.75	20	2.94	46	3.24	61	2.81	237	3.00
Eighth	41	3.10	32	2.97	10	2.51	17	2.76	51	2.81	49	2.87
Ninth	7	2.72	--	--	9	2.59	17	2.75	16	2.66	17	2.75
Total	135	2.87	463	2.89	60	2.78	126	3.01	195	2.83	589	2.94

When GPAs for the districts were combined, TOP graduates had comparable GPAs to their Control Group peers.

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

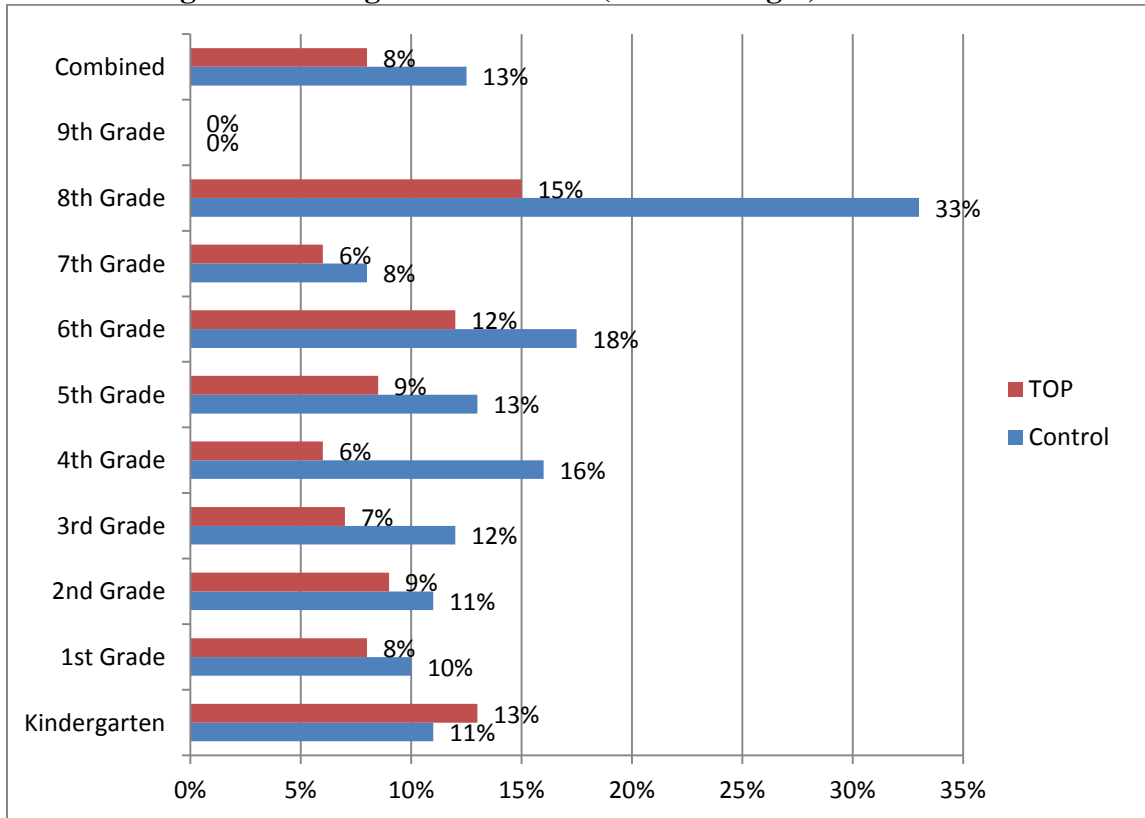
Special Education Placements for the Wichita and Derby TOP and Control Group Students from Kindergarten Through Ninth Grades (in Percentages) for the 2016-2017 School Year



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 kindergarten.

Figure 6

Special Education Placements for the Combined Districts for TOP and Control Groups from Kindergarten Through Ninth Grades (in Percentages) for the 2016-2017 School Year



When the two districts are combined, the percentages become more noticeable because the numbers are larger. For several grades, 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 38% 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 ninth 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. During the 2016-2017 school year, the TOP students averaged a 95% attendance rate. More often than not, they surpassed the attendance rate of their Control Group peers. By the ninth grade, TOP students were 1.5% more likely to attend classes than their Control Group peers. 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 Ninth Grades for the 2016-2017 School Year

Grade	Wichita				Derby				Combined			
	TOP		Control		TOP		Control		TOP		Control	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Kindergarten	105	94.2	667	94.4	16	96.8	106	95.2	121	95.5	773	94.8
First Grade	97	96.0	625	94.4	29	96.8	87	95.4	126	96.4	712	94.9
Second Grade	100	95.1	563	94.5	27	96.7	78	95.0	127	95.9	641	94.8
Third Grade	145	95.4	461	93.9	47	97.2	88	95.9	192	96.3	549	94.9
Fourth Grade	99	95.0	325	93.2	36	97.3	29	94.6	135	96.2	354	93.9
Fifth Grade	84	95.9	315	94.2	32	96.4	29	95.2	116	96.2	344	94.7
Sixth Grade	46	94.0	220	94.6	25	95.5	59	95.1	71	94.8	279	94.8
Seventh Grade	41	93.0	197	95.2	18	95.5	49	95.0	59	94.3	246	95.1
Eighth Grade	41	95.0	147	95.1	18	94.4	47	92.4	59	94.7	194	93.7
Ninth Grade	7	91.0	--	--	7	91.7	28	89.8	14	91.4	28	89.8
Total	765		3520		243		484		1008		4126	
Weighted Averages										95.2		94.1

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 than 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

discipline referrals. In Wichita, the TOP graduates had fewer repeat office referrals than the Control Group for six out of nine grades. In Derby, the TOP students had fewer repeats than the Control Group in nine 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 1% decrease in TOP students' attitudes of disenfranchisement compared to a 6% 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 Ninth Grades for Wichita and Derby for the 2016-2017 School Year

Grade	Wichita		Derby		Combined	
	TOP	Control	TOP	Control	TOP	Control
Kindergarten	7%	3%	0%	2%	4%	3%
First Grade	6%	6%	0%	1%	3%	4%
Second Grade	7%	6%	1%	3%	4%	5%
Third Grade	3%	8%	4%	4%	4%	6%
Fourth Grade	3%	8%	5%	6%	4%	7%
Fifth Grade	8%	4%	3%	7%	6%	6%
Sixth Grade	20%	19%	16%	22%	18%	21%
Seventh Grade	17%	18%	11%	12%	14%	15%
Eighth Grade	10%	21%	16%	20%	13%	21%
Ninth Grade	0%	--	0%	9%	0%	5%

Middle & High 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 and now high school. We asked for disciplinary information regarding suspensions and expulsions of the sixth through ninth grade students. Neither Derby nor Wichita reported any expulsions for the four grades. Table 9 provides the suspension percentages for both school districts.

Table 9

Suspension Rates (in Percentages) for Sixth Through Ninth Grade Students for Wichita and Derby TOP and Control Group Students for the 2016-2017 School Year

Grade	Wichita		Derby		Combined	
	TOP	Control	TOP	Control	TOP	Control
Sixth	20%	30%	4%	5%	12%	18%
Seventh	5%	20%	9%	10%	7%	15%
Eighth	10%	29%	15%	18%	13%	24%
Ninth	14%	--	18%	21%	16%	18%

Looking at the combined scores for the two districts, there are fewer suspensions for TOP children than there are for Control Group students across the grades.

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 ten years of evidence that the TOP Early Learning Centers have provided a means for this to occur. TOP children have shown the 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. Under these comparisons, TOP graduates performed favorably. TOP graduates were less likely to perform below grade

level than the Control Group in five of six grades tested in reading and in four of six grades in math. Similarly, TOP graduates were more likely to be at grade level and progressing to college readiness than the Control Group 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 and ninth graders; TOP graduates and the Control Group, on average, consistently indicated at or near a 3.0 GPA.

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 ninth grade. The eighth-grade TOP cohort had a 15% special education placement rate compared to 33% for their Control Group peers. This represents over a 50% reduction in eighth-grade special education placements for TOP grads. Similarly, when all grades were combined, TOP graduates had a 10% special education rate compared to 13% for the Control Group.

Attitudes

In terms of attendance, TOP children's attendance was high for each year; from kindergarten through ninth grade, with the exception of seventh grade. By ninth grade, they had 1.6% 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 1% drop for TOP and a 6% 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 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 ninth grade.

Conclusions

After ten 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 Group peers. We can also note that academically, in terms of mathematics and reading, and by GPAs for middle school students and now ninth graders, that TOP graduates outperform the Control Group. Thus, at least through the ninth grade, there is evidence of long-term benefits to a quality early education program.

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