

REPORT BRIEF

PURPOSE OF THE STUDY

The purpose of this study was to assess the utilization of Minnesota's Open Enrollment policy by students with child protection involvement as well as to measure the associated effect of Open Enrollment on these students' math and reading achievement. Particular attention was paid other factors associated with utilization and achievement, including race/ethnicity and family income.

The Achievement Gap and Students in Child Protection: Are Open Enrollment Policies the Answer?

BACKGROUND & PURPOSE

The story of the widening academic achievement gap in the United States grows daily in public rhetoric. Current research continues to explore causes of the achievement gap and test targeted interventions to ameliorate the gap (National Center for Education Statistics, n.d.). Experts have traditionally associated three factors with the achievement gap – race, school resources, and socio-economic status. Recently researchers have expanded this view by incorporating less-studied factors into the analysis, including family contextual factors like child maltreatment (or involvement in Child Protective Services [CPS]). This research has demonstrated that in addition to experiencing the trauma of abuse or neglect, students involved with CPS attain lower levels of academic achievement than their non-CPS-involved peers (Finklestein et al., 2002; Iverson, 2010; Smithgall, 2004; Stone, 2006; Stone, 2007).

A number of research-based policies and practices have been developed with hopes of ameliorating the achievement gap, including open enrollment policies. Open enrollment policies were developed to allow students access to all schools in a state, including well-resourced schools. The limited research on the utilization and associated outcomes of these policies does not include a specific focus on CPS-involved students. Not specifically studying the effects of open enrollment policies among CPS-involved students is short-sighted, as these students represent some of the most at-risk children in the United States.

This study sought to understand the associated effect of Minnesota's Open Enrollment policy for CPS-involved students in order to determine the effectiveness of the policy and encourage researchers, policy makers, and practitioners to think critically about ways to support improved academic achievement for CPS-involved students. This study answered two questions:

- 1) In what ways do CPS-involved students utilize Open Enrollment? and,*
- 2) Does utilization of Open Enrollment improve academic outcomes for CPS-involved students?*



OPEN ENROLLMENT POLICIES WERE DEVELOPED TO ALLOW STUDENTS ACCESS TO ALL SCHOOLS IN A STATE, INCLUDING WELL-RESOURCED SCHOOLS. NOT SPECIFICALLY STUDYING THE EFFECTS OF OPEN ENROLLMENT POLICIES AMONG CPS-INVOLVED STUDENTS IS SHORT-SIGHTED, AS THESE STUDENTS REPRESENT SOME OF THE MOST AT-RISK CHILDREN IN THE UNITED STATES.

METHODS

Educational data of students who attended school in Minneapolis during 2007-08 were linked to child protection data to understand utilization and associated academic outcomes of Open Enrollment (OE) for CPS-involved students. Utilization of OE during 2007-08 and was compared for CPS and non-CPS-involved students. Characteristics of schools prior to and after OE utilization, and academic outcomes associated with OE were assessed.

Through Minn-LInK, Minnesota Department of Education data of Minneapolis students who utilized OE during the 2007-08 school year (n=33,583) were linked to Minnesota Department of Human Services data. Through linking, 3,060 students were identified as having prior CPS involvement (see Table 1). A one-way ANOVA and logistic regression were used to understand OE utilization across CPS- and non-CPS-involved students. A one-way ANOVA was used to compare differences among characteristics of schools prior to and after OE utilization for CPS-involved students when school characteristics were available (n=304). A linear mixed model (LMM) was used to examine the effect of OE on CPS-involved students' Minnesota Comprehensive Assessment-II (MCA-II) math and reading achievement. Two groups were developed based on the availability of MCA-II scores and continued enrollment in the same school between 2007-08 and 2009-10. The first group consisted of 28 students (grades 3-6 in 2007-08) who were CPS-involved and utilized OE in 2007-08. A propensity score optimal matching method produced a comparison group of 58 CPS-involved students who did not utilize OE but whose characteristics were similar (race/ethnicity, gender, special education receipt, free/reduced lunch eligibility, and 2007-2008 MCA-II scores in reading and math) to those of the first group (Rosenbaum & Rubin, 1983).

Table 1. Students Who Resided in Minneapolis in 2007-08

	CPS-Involved (n=3,060)		Non-CPS-Involved (n=30,523)	
	N	%	N	%
Ethnic Groups				
American Indian	363	11.9%	1,144	3.7%
Asian	72	2.4%	3,040	10.0%
Hispanic	244	8.0%	5,366	17.6%
Black	2,030	66.3%	11,857	38.8%
White	351	11.4%	9,116	29.9%
Family Income				
Eligible for Free Lunch	2,310	75.5%	15,071	49.4%
Eligible for Reduced Lunch	92	3.0%	1,801	5.9%
Not Eligible	658	21.5%	13,651	44.7%
Special Education Groups				
Eligible for Special Education	869	28.4%	4,039	13.2%
Not Eligible	2,191	71.6%	26,484	86.8%

FINDINGS

Open Enrollment was utilized by a small proportion of students, but CPS-involved students were more likely than their non-CPS-involved peers to utilize OE. When OE was utilized by CPS-involved students, they were more likely to move to schools with characteristics associated with less diversity, newer teachers, and higher academic achievement. However, use of OE was not significantly related to students' math or reading achievement.

Utilization of Open Enrollment

Open Enrollment was used by a small proportion of students, regardless of CPS-involvement or other characteristics (see Table 2). A One-way ANOVA revealed that CPS-involved students utilized OE at significantly higher rates (3.4%) than their peers (2.2%). This trend was evident across students who were eligible to receive free or reduced price lunches (FRL; i.e., poorer students) or special education services. All CPS-involved students – with the exception of Asian and Pacific Islander students – had higher use of OE than their peers.

Logistic regression analysis revealed that CPS-involved students were 1.5 times more likely to use OE than their peers. American Indian, Asian, Hispanic, and Black students were also significantly more likely (3.8, 2.6, 2.4, and 5.6 times more likely, respectively) to utilize OE than their White peers. However, students who were eligible to receive FRL (i.e., poorer students) and students who received special education services were significantly less likely (3.7, 3.1, and 1.1 times less likely, respectively) to use OE than their peers who were not eligible for FRL or special education services.

Comparison of School Characteristics

Characteristics of students' resident and newly elected schools (via OE) were compared to understand differences in student composition, school resources, and school performance. As seen in supplemental table 3, the ANOVA results revealed that students (regardless of CPS involvement; row 1 in table) were significantly more likely to use OE to move to schools whose student composition included fewer students of color, low-income students, limited English proficient students, and students receiving special education services. Students who used OE were significantly more likely to move to schools with a higher proportion of new, but highly educated teachers. Significant differences in student-teacher

ratios between resident and new schools were not found. Students who used OE were significantly more likely to move to schools with higher achievement on standardized tests of math and reading (based on average scores and proficiency levels).

Trends found in the general population of students were similar for CPS-involved students in regard to schools' student compositions, school resources, and school achievement (see supplemental Table 3). However, unlike students in the general population, students with CPS involvement did not move to schools with more highly educated teachers than their original schools.

Trends for CPS-involved students were further assessed by student race/ethnicity. Across racial/ethnic groups, CPS-involved students tended to move to schools in similar ways for school student composition and achievement. CPS-involved students in all racial/ethnic groups (except Hispanic students) tended to move to schools whose student composition included fewer students of color, low-income students, limited English proficient students, and students receiving special education services; CPS-involved students also moved to schools with higher academic achievement levels (see supplemental Table 3). Mixed results were seen across racial/ethnic groups in regard to school resources.

Analysis based on family income revealed that students with CPS-involvement moved to schools in similar ways across family income categories for school student composition and achievement. Students in all income categories moved to schools whose student composition included fewer students of color, low-income students, limited English proficient students, and students receiving special education services. Students in all income categories moved to schools with higher achievement levels than their resident schools. Mixed results were seen in regard to school resources.

Effect of Open Enrollment on Achievement for CP-Involved Students

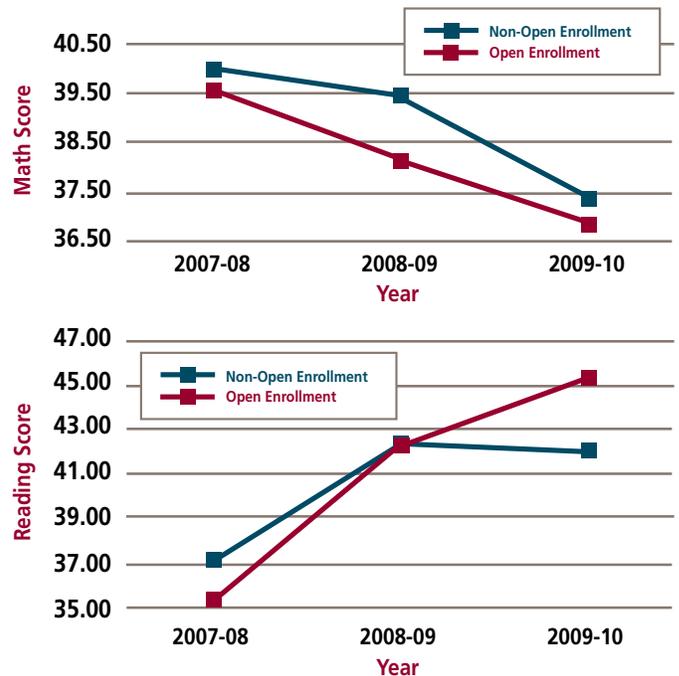
Different patterns were evident in mean reading and math scores over time based on OE utilization. Average math scores of CPS-involved students decreased over time regardless of OE utilization (see Figure 1). The gap between student scores grew depending on OE utilization between the 2007-08 and 2008-09 academic years but recovered by the 2009-10 academic year when the gap equaled that seen when students initially elected OE [2007-08]. Whereas mean reading scores of the non-Open Enrollment group slightly decreased between the 2008-09 and 2009-10 academic years the

Table 2. Proportion of Students Utilizing Open Enrollment

	CPS-Involved			Non-CPS-Involved			Difference	
	Total N	N	%	Total N	N	%		
Total	3,060	103	3.4%	30,523	663	2.2%	1.2%	***
Racial/Ethnic Groups								
American Indian	363	14	3.9%	1,144	23	2.0%	1.9%	
Asian and Pacific Islander	72	0	0.0%	3,040	53	1.7%	-1.7%	
Hispanic	244	7	2.9%	5,366	70	1.3%	1.6%	*
Black	2,030	73	3.6%	11,857	420	3.5%	0.1%	
Sub-total: Students of Color	2,709	94	3.5%	21,407	566	2.6%	0.9%	*
White	351	9	2.6%	9,116	97	1.1%	1.5%	*
Economic Groups								
Eligible for Free Lunch	2,310	47	2.0%	15,071	217	1.4%	0.6%	*
Eligible for Reduced Lunch	92	2	2.2%	1,801	25	1.4%	0.8%	
Sub-total: Free or Reduced Lunch	2,402	49	2.0%	16,872	242	1.4%	0.6%	*
Not Eligible	658	54	8.2%	13,651	421	3.1%	5.1%	***
Special Education Groups								
Eligible for Special Education	869	24	2.8%	4,039	79	2.0%	0.8%	
Not Eligible	2,191	79	3.6%	26,484	584	2.2%	1.4%	***

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Figure 1. Changes in Mean Math and Reading Scores Over Time by Open Enrollment (n=84)



Open Enrollment group showed an increased in reading scores in the same period. Students who utilized OE began with a lower mean score than students who didn't utilize OE but OE students had higher mean scores in the last year (2009-10). However, results of the linear mixed model analyses revealed a non-significant effect of OE on student achievement for students with CPS involvement.

Conclusion

Open enrollment policies were developed to provide students with access to a variety of educational settings that may not be available in the neighborhoods in which students live. These policies were developed with particular focus on students who have struggled academically, namely those students who have fallen into the achievement gap. However, little is known about how these policies are utilized by students who have been involved with the child protection system – a group of students whose experiences and characteristics put them at heightened risk of falling into the achievement gap – or how these policies affect achievement for this group of students. This study investigated the utilization of Minnesota's Open Enrollment policy for CPS-involved students and assessed its effect on student achievement.

As a whole, only a small proportion of students utilized OE to change schools. It is unknown why such a small proportion of students utilized this policy during the study period, especially given that this study focused on a large metropolitan area that offered a variety of educational programs, including traditional public schools, and charter and magnet schools. Family awareness of OE, local school policies that dictate how OE is applied, transportation issues, satisfaction with the residential district, and a number of other characteristics are likely at play. Although OE was rarely utilized, when it was utilized it tended to be utilized by groups of students whose characteristics were in alignment with research on the achievement gap. CPS-involved students and students of color were much more likely to utilize OE than their white peers. However, students from low-income families and students receiving special education services were less likely to utilize OE. When OE was used, students tended to move to schools with different characteristics than their neighborhood schools. Newly chosen schools tended to have fewer students of color, low-income students, limited English proficient students, and students receiving special education services but higher math and reading achievement levels. (Mixed results were seen for school resources in relation to instruction.) However, movement to these new schools through OE was not significantly associated with growth in individual student achievement in math and reading. It appears that for CPS-involved students, OE may be one method of supporting enhanced student achievement but it is not sufficient to support academic success. Additional supports are needed for CPS-involved students to avoid the achievement gap.

LIMITATIONS

Several limitations should be noted about this study. First, indicators of academic achievement were limited to those available in administrative data, namely MCA-II scores. Other indicators of reading and math achievement were unavailable. Second, this study focused on students who resided in Minneapolis. It is unknown how results may generalize to other students, including students in suburban or rural areas. In addition, analysis of academic achievement was based on a very small sample size, limiting the ability to detect differences.

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The Center for Advanced Studies in Child Welfare (CASCW) is a resource for child welfare professionals, students, faculty, policy-makers, and other key stakeholders concerned about child welfare in Minnesota. **Minn-LInK** is a unique collaborative, university-based research environment with the express purpose of studying child and family well being in Minnesota using state administrative data from multiple agencies.

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