

1 **Assessing the Impacts of Student Transportation via Transit on Student**  
2 **Attendance and Academic Achievement**

3  
4  
5  
6 **Kirti V. Das**

7 Hubert H. Humphrey School of Public Affairs  
8 University of Minnesota  
9 301 19<sup>th</sup> Avenue South, Minneapolis, MN 55455  
10 Fax: +1 612 625 3513  
11 Tel: +1 612 625 8092  
12 Email: [dasxx054@umn.edu](mailto:dasxx054@umn.edu)  
13 \*Corresponding Author

14  
15  
16 **Yingling Fan**

17 Hubert H. Humphrey School of Public Affairs  
18 University of Minnesota  
19 301 19<sup>th</sup> Avenue South, Minneapolis, MN 55455

20  
21  
22 Word count: 3468 words text + 3 tables X 250 words (each) = 4236 words  
23 Abstract word count: 235

24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40 Submission date: 8.1.2015

41 :  
42  
43  
44  
45  
46

1 **ABSTRACT**

2  
3 In August 2013, all transportation-eligible Minneapolis high school students began using public  
4 transportation for school trips and other purposes instead of yellow school buses under the Go-  
5 To Student Pass Program. Currently under the program close to 6,000 students are allowed  
6 unlimited rides on city buses and light-rail trains between 5 a.m. and 10 p.m. seven days a week  
7 during the school year. Having fully implemented the Go-To Student Pass program in  
8 Minneapolis high schools and with the program being active for close to three years, both,  
9 Minneapolis Public Schools and Metro Transit are interested in exploring potential benefits of  
10 the program for students. Despite the implementation of similar programs across the country  
11 evaluation of these programs in terms of student benefits, attendance and academic achievement  
12 in particular, have been limited and anecdotal. This paper is a direct response to the local and  
13 national need for rigorous empirical examination of the academic benefits of student  
14 transportation on transit and focuses on looking at the impacts of the Go-To Student Pass  
15 Program on student GPA and attendance of Minneapolis high school students. Findings from the  
16 regression analysis indicate that while enrollment in the program did not impact student GPA  
17 scores, the total number of absent days was found to be 18 (IRR=.82,  $p < 0.01$ ) percent lower for  
18 students enrolled in the Go-To Student Pass Program. Policy implications and the need for  
19 further research on the subject are discussed.  
20

## 1 INTRODUCTION

2  
3 In August 2013, all transportation-eligible Minneapolis high school students began using public  
4 transportation for school trips and other purposes instead of yellow school buses under the Go-  
5 To Student Pass Program. The partnership between Metro Transit and Minneapolis Public  
6 Schools (MPS) grew from several demonstration programs, including providing transportation  
7 for summer school students and for students who were permitted to finish high school at  
8 buildings not in their neighborhood after the district mandated students attend high schools  
9 closer to home. The program was initiated through a pilot program between 2009 and 2012. The  
10 pilot program included three MPS high schools, Edison, Roosevelt and Wellstone International,  
11 and had approximately 1,000 students enrolled in 2011-2012. The program's first phase, 2012-  
12 2013, expanded the number of enrolled students to approximately 2,500 including expanded  
13 options students, and added three additional high schools, Patrick Henry, Washburn and North,  
14 to the program. The program, which has now been fully implemented is available to all MPS  
15 high school students who live outside the walking zone of schools (2 miles in most cases) and  
16 also to those who qualify for free/reduced lunches irrespective of where they live. MPS  
17 purchases student passes from Metro Transit for \$300 per pass per academic year. Students ride  
18 regular-route buses and trains, sharing trips with the general public. The student passes allow  
19 unlimited rides on city buses and light-rail trains between 5 a.m. and 10 p.m. seven days a week  
20 during the school year. In addition, students who do not qualify for the program have the option  
21 of purchasing it for either the whole year (\$300) or by quarter (\$75). Currently, some 6,000  
22 students are using student passes at all seven traditional high schools and at high schools that  
23 enroll students not best suited for standard high schools.

24  
25 As is the case with many similar programs across the country, this program was initially  
26 envisioned to meet the challenges of increasingly complicated and expensive student  
27 transportation which more often than not are beyond the control of school districts. These  
28 challenges include complex routing logistics to accommodate expanded school choices and open  
29 enrollment policies; rising contracting and fuel costs; safety and emission regulations for buses;  
30 and state and federal mandates for student transportation to name a few (1-3). To cope with these  
31 challenges, the cross-sector approach to student transportation is widely considered innovative  
32 and promising for fiscal benefits, community acceptance, and social equity outcomes (4). Similar  
33 approaches have been implemented in several other cities including; Portland, OR; Oakland, CA;  
34 Lakeland, FL; Washington, DC; Nashville, TN; Seattle, WA; San Francisco, CA; Boston, MA;  
35 Ney York City, NY; and Baltimore, MD.

36  
37 Having fully implemented the Go-To Student Pass program in MPS high schools and with the  
38 program being active for close to three years, both MPS and Metro Transit are interested in  
39 exploring potential benefits of the program for students. At the national level, in addition to  
40 direct transportation-related benefits, many similar programs aim to provide students with  
41 scheduling flexibility; greater access to the wide variety of learning opportunities at and away  
42 from schools; the ability to remain at school for academic and extracurricular programs beyond  
43 regular school hours thereby potentially encouraging student attendance and academic  
44 achievement (4-6).

45

1 Existing studies indicate a strong link between attendance and academic achievement finding  
2 higher levels of attendance to be associated with better grades, performance on standardized tests  
3 and graduation from high school in addition to higher chances of success at later stages in life (7-  
4 12). However, despite the implementation of such programs across the country and their  
5 potential benefits to students, evaluation of these programs in terms of student benefits,  
6 attendance and academic achievement in particular, have been limited and anecdotal (4-6).

7 While such evidence has indicated the potential promise of such programs for students, existing  
8 anecdotal evidence has not been tested in empirical research.

9  
10 This paper is a direct response to the local and national need for rigorous empirical examination  
11 of the academic benefits of student transportation on public transit. The paper focuses on the  
12 quantified empirical analysis of the impact of the Go-To Student Pass Program on the attendance  
13 and academic performance (based on GPA) of students enrolled in MPS high schools using  
14 survey data and existing student data from MPS. The findings are drawn from a larger study  
15 funded by Metro Transit which is currently in progress as an evaluation of the economic,  
16 educational and societal benefits of the Go-To Student Pass Program.

## 17 **EXISTING LITERATURE**

18  
19  
20 Based on the scope of this paper, the literature review consisted of two parts. First, looking for  
21 evidence to validate attendance as a good measure of student achievement and secondly,  
22 exploring the potential of student transportation to increase student attendance and academic  
23 performance (GPA).

24  
25 On the academic side, the importance of attendance for student achievement is well established  
26 as studies indicate that being more regular at school is associated with better grades, performance  
27 on standardized tests and graduation from high school (7-9). Graduating from high school in turn  
28 is associated with improved lifetime behavioral and health outcomes such as lower rates of  
29 incarceration, involvement in violent crime, teen pregnancy and substance abuse (10-12). In a  
30 study conducted in Baltimore, MD focusing on student achievement at public schools, regression  
31 models established that student attendance had a strong and positive impact on student  
32 performance in standardized tests (13). Similarly, a study of Louisiana public schools using  
33 input-output analysis found significant and positive impacts of student attendance on  
34 standardized tests scores with the impact being more pronounced in urban areas (14). In a more  
35 recent national report researchers had similar findings suggesting that chronic absenteeism  
36 increased educational gaps at the high school level and that there was a disproportionate impact  
37 on students from low-income families (15).

38  
39 On the transportation side, existing studies have identified a lack of convenient and affordable  
40 transportation for students as a significant barrier to school attendance and being associated with  
41 chronic absenteeism (5, 16, 17). As a result it has been suggested that provision of free transit  
42 passes to students as with the Go-To Student Pass Program would give them greater  
43 transportation options and potentially have positive impacts on a variety of academic, behavioral  
44 and health outcomes for students and their families (10). The academic benefits in particular,  
45 include increased attendance and academic achievement (5). However, despite the  
46 implementation of similar programs in cities across the country, limited studies have evaluated

1 the impacts of these programs (5). Table 1 provides an overview of similar programs across the  
2 country and potential program results with relation to student attendance and achievement.

3  
4 Although improving student attendance is mentioned as one of the goals of many student pass  
5 programs in Table 1, there is an established dearth of evidence available on the potential impacts  
6 their on student attendance (5, 10). In our review of literature we found only one study that  
7 included such an evaluation of a student transportation program (18). The study evaluated a free  
8 bus pass program aimed at low income (based on free/ reduced lunch eligibility) middle and high  
9 school students in the San Francisco Bay Area (18). Using before- and after-travel activity  
10 surveys as well as in-depth focus groups, they conducted analysis incorporating attendance data  
11 and found that the program did not increase school attendance. In their more detailed evaluation  
12 report they also looked at GPA scores for students and found no change (6). However, they did  
13 go on to point out the complexity and challenges that such a program would have to face in  
14 increasing attendance and that the process would most probably take more than a year to show  
15 results, which their study was unable to capture. It is important to point out and keep in mind that  
16 as suggested by McDonald et al., (18), and supported by existing research, transportation options  
17 are only one piece of the puzzle when looking at determinants of student participation in schools.  
18 Social, economic, academic and personal factors and how students adjust to these over a period  
19 of time play a significant role in determining their level of participation in school (19,20).

20  
21 In summary, given the state of existing research on how student transportation on transit may  
22 impact attendance and academic achievement of students, there is a dire need for rigorous  
23 empirical examination of such a program. In this paper using survey data collected at MPS high  
24 schools and existing student data from MPS, the impacts of the Go-To pass program on student  
25 attendance and academic achievement are evaluated while considering individual level social,  
26 economic and academic factors. Evidence from the study would not only expand the knowledge  
27 base on the subject but could also potentially be used by policy makers in other cities to expand  
28 transportation options for students.

1 **TABLE 1 Existing Student Pass Programs**

<b>Location</b>	<b>Who is served</b>	<b>Student attendance and achievement based program results</b>
Portland, OR (4)	Free passes to all high school students regardless of income	-
Nashville, TN (21)	Free passes to all MNPS students and MNPS Charter schools students enrolled in grades 9 through 12.	-
Seattle, WA (22)	Subsidized pass for students living outside the school's walk boundary and not receiving a parking pass	-
Oakland, CA (4)	Subsidized pass for youth 5-18 years of age with a gross annual family income at or below 100 percent of the Bay Area Median Income level	-.
Lakeland, FL (4)	All 25,000 Polk County high school students. \$2.14 annual fee	-
New York City, NY (10)	Free or subsidized passes for students based on distance from school that can be used Monday to Friday from 5:30 am to 8:30 pm.	-
Washington, DC (4)	Subsidized passes for students based on where they live, age, enrollment and transportation needs. Free for students with disabilities.	-
	Free pass for students with a DC One student id card between 5:30 and 9 am and 2 to 8 pm.	-
Boston, MA (10)	Free student passes for middle and high school students based on distance from school which can be used Monday to Friday.	-
Baltimore, MD (4)	Reduced fare for middle and high school students living more than 1.5 miles from their school	Baltimore middle school absences cut to half (no evidence to attribute it to the program)
San Francisco Bay Area, CA (18)	Youth pass for all young riders. Free bus pass limited to low income middle and high school students.	Free bus pass discontinued due to funding after first year. Youth pass still used (\$20). No changes in attendance or student GPA.

## 1   **METHODS**

2

### 3   **Data Collection and Sample Participants**

4

5   This paper is drawn from data from a larger ongoing evaluation study which is a collaborative  
6   effort between researchers at the University of Minnesota, MPS and Metro Transit to evaluate  
7   the economic, educational and societal benefits of the Go-To Student Pass Program. For this  
8   paper we focus on the aspects of the study that are key to assessing the impacts of the program  
9   on student attendance and academic achievement (measured by GPA).

10

11   For this paper data was collected from two primary sources, a student survey and existing student  
12   data from MPS. The student survey that was conducted at MPS high schools between May 12th  
13   and June 5th 2015. Questions in the student surveys cover a wide range of aspects related to  
14   educational and societal impacts of student passes - e.g., changes in travel behavior and after-  
15   school activities, changes in attitudes and perceptions towards transit, potential benefits of the  
16   passes, frequency of pass use, demographic and family structure variables, etc. The survey was  
17   implemented using the web-based survey tool Qualtrics (23). These surveys were self-  
18   administered, available only in English and completed in-class using laptop computers, tablets or  
19   smartphones. A small proportion of surveys (1%) were completed on paper where online survey  
20   completion was not a possibility. While the intention of the investigators was to reach all  
21   students, due to scheduling issues at multiple locations the final survey was conducted using a  
22   convenience sample based on class schedules and teacher availability to implement the survey.  
23   The data collection effort was approved and monitored by the University of Minnesota  
24   Institutional Review Board. Once the student survey was complete MPS provided additional data  
25   on students that participated in the survey including GPA, attendance, free/reduced lunch  
26   eligibility, gender, grade and race/ethnicity.

27

28   Of the 8,171 students enrolled in MPS high schools in Spring 2015, 2,453 (30 percent) students  
29   participated in the survey. Table 2 shows the descriptive statistics for the survey participants. Of  
30   the participating students 34 percent were White, 32 percent were African American, 14 percent  
31   Asian, 2 percent American Indian and 19 percent Hispanic. The median grade of students that  
32   participated in the survey was 10th with 73 percent reporting being enrolled in the Go-To  
33   Student Pass Program and 60 percent on free/reduced lunches. Additionally, 49 percent were  
34   male, 21 percent were foreign born, 14 percent had a driver's license, 31 percent reported having  
35   a job and the average age was 16.52 years.

36

37

1 **TABLE 2 Descriptive Statistics of the Final Sample (N= 2453)**

	<u>Type</u>	<u>Mean</u>	<u>Median</u>
<b><u>Dependent variables</u></b>			
Total days absent (Fall 2014)	Interval-ratio	3.71	-
GPA (Fall 2014)	Interval	2.97	-
<b><u>Key explanatory variable</u></b>			
Go-To Student Pass User	Binary	0.73	-
<b><u>Control variables</u></b>			
Grade	Ordinal: 9-12	-	10 (10 <sup>th</sup> Grade)
Free Reduced Lunch Status	Binary	0.6	-
Use pass for afterschool activity	Binary	0.43	-
Use pass to go or come back from school	Binary	0.64	-
Total days absent Spring (2014)	Interval-ratio	3.97	-
GPA Spring (2014)	Interval	2.96	-
Male respondent	Binary	0.49	-
Age	Interval-ratio	16.52	-
American Indian	Binary	0.02	-
African American	Binary	0.32	-
Asian	Binary	0.14	-
Hispanic	Binary	0.19	-
Foreign born- You	Binary	0.21	-
Foreign born- Your mother	Binary	0.41	-
Foreign born- Your father	Binary	0.39	-
Household members under 18	Interval-ratio	2.7	-
Do you have a driver's license?	Binary	0.14	-
Do you have a job(s)?	Binary	0.31	-
General Perceptions: Transit is safe to use	Ordinal: 1-4	-	3 (Agree)
General Perceptions: I can get everywhere I need to using transit	Ordinal: 1-4	-	3 (Agree)
General Perceptions: Transit costs less than driving	Ordinal: 1-4	-	3 (Agree)

2

## 1 **Regression Analysis and Measures**

2  
3 For the statistical analysis total days absent (enrolled days – days present) and GPA for all  
4 participating students from Fall 2014 were used as dependent variables (Table 2). The key  
5 explanatory variable used for the analysis was enrollment in the Go-To Student Pass Program  
6 (1=yes, 0=no) as reported by the students in the study survey. Two regression models were used  
7 for the analysis based on the nature of the dependent variables. The regression model of Go-To  
8 Student Pass Program enrollment on GPA was estimated using multiple linear regression and  
9 attendance measured by total days absent was estimated using negative binomial regression and  
10 interpreted using incident rate ratio (IRR).

11  
12 To accommodate for other factors that may impact student attendance and achievement as  
13 highlighted in existing literature, a number of control variables were included in the analysis.  
14 Data on race, ethnicity and being foreign born was used to create four minority race variables –  
15 African American, Asian, American Indian and Hispanic (all coded as 1=yes, 0=no), and three  
16 variable describing immigrant status – student being foreign born, mother being foreign born and  
17 father being foreign born (all coded as 1=yes, 0=no). Other individual level control variables  
18 included are, whether or not the student was enrolled in the free/reduced lunch program, had a  
19 driver driver’s license, had a job, was male (all coded as 1=yes, 0=no), the grade the student was  
20 in (ordinal for 9-12 grades), the student’s age and the number of members in the student’s  
21 household under the age of 18. To control for past behavior of the student in terms of attendance  
22 and academic achievement, total days absent and GPA for all participating students from Spring  
23 2014 were used as control variables. To account for students that enroll in the Go-To Student  
24 Pass Program and do not actually use the pass, two control variables were added from the  
25 survey: if the student used the pass to get to or back from the school and if the student used the  
26 pass for participating in after school activity (both coded as 1=yes, 0=no). Finally, three  
27 perception variables from the student survey were included to account for difference in pass use  
28 based on the student’s opinion of transit. They included if the students thought: transit was safe  
29 to use, could get them everywhere they need to go and if transit cost less than driving (4-point  
30 Likert scale: 1=do not agree, 2=somewhat agree, 3= agree, and 4=strongly agree).

## 31 **RESULTS**

32  
33  
34 Results from the regressions models are shown in Table 3. While looking at academic  
35 achievement, in line with previous research, we found no statistically significant association  
36 between enrollment in the Go-To Student Pass Program and student GPA scores. In terms of  
37 attendance, controlling for various socio-demographic, previous semester’s attendance, pass use  
38 and transit perception variables, total number of absent days were found to be 18 (IRR=.82,  
39  $p<0.01$ ) percent lower for students enrolled in Go-To Student Pass Program.  
40

1 **TABLE 3 Regression Results**

	Student GPA (multiple linear regression coefficients)	Number of days absent (negative binomial IRR)
<b>Key explanatory variable</b>		
Go-To Student Pass user	-0.03	0.82**
<b>Control variables</b>		
Grade	-0.02	1.04
Free/reduced lunch status	-0.07**	1.02
Use pass for afterschool activity	0.03	0.99
Use pass to go or come back from school	-0.01	1.21**
Total days absent Spring (2014)	-	1.11***
GPA Spring (2014)	0.80***	-
Male respondent	-0.05**	0.99
Age	0	1.06*
American Indian	-0.35***	1.37*
African American	-0.07**	1.07
Asian	0.03	0.78***
Hispanic	-0.12***	1.21**
Foreign born- student	0.10***	0.96
Foreign born- mother	-0.03	1.23**
Foreign born- father	0.08**	0.85**
Household members under 18	0	0.99
Do you have a driver's license?	0.02	1.00
Do you have a job(s)?	0.01	0.95
General Perceptions: Transit is safe to use	0	0.95
General Perceptions: I can get everywhere I need to using transit	0	1.04
General Perceptions: Transit costs less than driving	0	0.97
<b>Constant</b>	0.95***	0.66
<b>Ln alpha<sup>a</sup></b>	-	-0.74***
<b>Summary statistics</b>		
Number of observations	1582	1553
Log likelihood	-	-3507.22
R-squared	0.7321	-

2 Notes:

3 a Ln alpha= Natural log of the over dispersion parameter.

4 \* p&lt;.1; \*\* p&lt;.05; \*\*\* p&lt;.01

5

6

## 1 CONCLUSIONS

2  
3 This paper presents the first rigorous empirical examination of the academic benefits of student  
4 transportation on public transit. In terms of attendance, the number of days students were absent  
5 from school was found to be 18 percent lower for students enrolled in the in the Go-To Student  
6 Pass Program. This finding highlights the potential of similar student transportation programs in  
7 going beyond operational and financial efficiencies and contributing to improved lifetime  
8 outcomes for students. The analysis also found no significant association between program  
9 enrollment and changes in student GPAs. This lack of association is not entirely surprising.  
10 Based on existing research, better grades i.e. GPA is only one of the potential aspects of  
11 academic achievement that could be improved through better attendance. A more robust  
12 approach to analyzing academic achievement would be to include standardized test scores and  
13 graduation rates while looking at the impacts of similar programs. This was not possible for this  
14 paper due to limitations on data available.

15  
16 The findings from this paper warrant further consideration by policy makers. First, it points to  
17 the potential of such cross-sector programs in achieving the goal of potentially improving student  
18 attendance by providing them with scheduling flexibility, transportation options, greater access  
19 to the wide variety of learning opportunities at and away from schools, and the ability to remain  
20 at school for academic and extracurricular programs beyond regular school hours. Policy makers  
21 considering the implementation of similar programs should take student benefits in terms of  
22 increased attendance and its related benefits into account as they weigh their options. Secondly,  
23 for school districts in particular, that have focused on student transportation on transit  
24 specifically due to administrative and fiscal concerns while implementing other programs to  
25 promote student attendance, these findings present an opportunity of looking at resource  
26 allocation to create more efficient, holistic and integrated strategies.

27  
28 While the findings from this paper do highlight the academic benefits of student transportation  
29 on transit for the Go-To Student Pass Program it is critical to acknowledge the need for further  
30 research and evaluation of similar programs across geographies before it can be promoted as a  
31 viable solution to increasing student attendance and potentially impacting student achievement.  
32 An important aspect of such research would be to look at the differences in programs and their  
33 implementation. Factors such as the fiscal burned on users based on whether riding transit is  
34 subsidized or free under the program, level of transit service available, the targeted program  
35 population (i.e. low income youth vs. all students and local socio-demographics, etc.) are just  
36 some factors that may significantly affect the results of a program. This study provides the first  
37 step in moving towards a better understanding of the academic benefits of student transportation  
38 on public transit.

39

1 **ACKNOWLEDGEMENTS**

2

3 The authors thank the Metropolitan Council for financial support for this research. The authors  
4 also thank staff from Metro Transit, Minneapolis Public Schools and Saint Paul Public Schools  
5 who provided guidance and research assistance for the project.

6

1 **REFERENCES**

- 2
- 3 1. Agency Council on Coordinated Transportation. *Building a Community Bus: Guide to*
- 4 *Coordinating Pupil and Public Transportation*. Washington State Department of
- 5 Transportation, 2004. [http://www.wsdot.wa.gov/acct/library/community\\_bus.pdf](http://www.wsdot.wa.gov/acct/library/community_bus.pdf).
- 6 Accessed on April 7, 2015.
- 7 2. Price, M., S. Herzenberg, S. Brandon, and T. Herzenberg. Runaway Spending: Private
- 8 Contractors Increase the Cost of School Student Transportation Services in Pennsylvania.
- 9 *Keystone Research Center*, 2012.
- 10 3. Wilson, E. J., J. Marshall, R. Wilson, and K.J. Krizek, (2010). By Foot, Bus or Car:
- 11 Children's School Travel and School Choice Policy. *Environment and Planning A*. Vol.
- 12 42, No. 9, 2010, pp. 2168.
- 13 4. Vincent, Jeffrey M., C. Makarewicz, R. Miller, J. Ehrman, and D. L. McKoy. Beyond the
- 14 Yellow Bus: Promising Practices for Maximizing Access to Opportunity Through
- 15 Innovations in Student Transportation. *Center for Cities + Schools, University of*
- 16 *California*, 2014.
- 17 5. Gase, L. N., T. Kuo, S. Teutsch, and J.E. Fielding. Estimating the Costs and Benefits of
- 18 Providing Free Public Transit Passes to Students in Los Angeles County: Lessons
- 19 Learned in Applying a Health Lens to Decision-Making. *International Journal of*
- 20 *Environmental Research and Public Health*, Vol. 11, No.11, 2014, pp. 11384-11397.
- 21 6. McDonald, N., S. Librera, E. Deakin, and M. Wachs, M. Low-Income Student Bus Pass
- 22 Pilot Project Evaluation: Final Report. *Institute of Transportation Studies*, 2003.
- 23 7. Silver, D., M. Saunders, and E. Zarate. What Factors Predict High School Graduation in
- 24 the Los Angeles Unified School District. *Policy Brief*, Vol. 14, 2008.
- 25 8. Allensworth, E. M., and J.Q. Easton. What Matters for Staying on Track and Graduating
- 26 in Chicago Public High Schools. Chicago, Illinois. *Consortium on Chicago School*
- 27 *Research*.
- 28 [http://highlineschools.org/cms/lib07/WA01919413/Centricity/Domain/1149/07%20What](http://highlineschools.org/cms/lib07/WA01919413/Centricity/Domain/1149/07%20What%20Matters%20Final.pdf)
- 29 [%20Matters%20Final.pdf](http://highlineschools.org/cms/lib07/WA01919413/Centricity/Domain/1149/07%20What%20Matters%20Final.pdf) Accessed April 7, 2015.
- 30 9. Roby, D. E. Research on School Attendance and Student Achievement: A Study of Ohio
- 31 Schools. *Educational Research Quarterly*, Vol. 28, No. 1, 2004, pp. 3-16.
- 32 10. Los Angeles County Department of Public Health. *The Potential Costs and Benefits of*
- 33 *Providing Free Public Transportation Passes to Students in Los Angeles County: Full*
- 34 *Report*, 2013. [www.publichealth.lacounty.gov/plan/docs/HIA/12.16.2013Report.pdf](http://www.publichealth.lacounty.gov/plan/docs/HIA/12.16.2013Report.pdf).
- 35 Accessed on April 7, 2015.
- 36 11. Belfield, C. R., and H.M. Levin, H. M. High School Dropouts and the Economic Losses
- 37 from Juvenile Crime in California. *California Dropout Research Project Report*, Vol.16,
- 38 2009.
- 39 12. Freudenberg, N., and J. Ruglis. Peer Reviewed: Reframing School Dropout as a Public
- 40 Health Issue. *Preventing Chronic Disease*, Vol. 4, No. 4, 2007.
- 41 13. Lamdin, D. J. Evidence of Student Attendance as an Independent Variable in Education
- 42 Production Functions. *The Journal of Educational Research*. Vol. 89, No. 3, 1996, pp.
- 43 155-162.
- 44

- 1 14. Caldas, S. J. Reexamination of Input and Process Factor Effects on Public School  
2 Achievement. *The Journal of Educational Research*, Vol. 86, No. 4, 1993, pp. 206-214.
- 3 15. Balfanz, R., and V. Byrnes. The Importance of Being There: A Report on Absenteeism in  
4 the Nation's Public Schools. Baltimore, Maryland. *Johns Hopkins University School of*  
5 *Education, Everyone Graduates Center, Get Schooled*, 2012, pp. 1-46.
- 6 16. Baker, M. L., J.N. Sigmon, and M.E. Nugent. Truancy Reduction: Keeping Students in  
7 School. *Juvenile Justice Bulletin*, 2001.
- 8 17. Los Angeles County School Attendance Task Force. *A Comprehensive Approach to*  
9 *Improving Student Attendance in Los Angeles County*, 2012.  
10 [www.educationcoordinatingcouncil.org/SATF\\_DOCS/SATF\\_Reports/SATF\\_Report\\_2-](http://www.educationcoordinatingcouncil.org/SATF_DOCS/SATF_Reports/SATF_Report_2-2-12.pdf)  
11 [2-12.pdf](http://www.educationcoordinatingcouncil.org/SATF_DOCS/SATF_Reports/SATF_Report_2-2-12.pdf) Accessed on April 7, 2015
- 12 18. McDonald, N., S. Librera, and E. Deakin. Free Transit for Low-Income Youth:  
13 Experience in San Francisco Bay Area, California. *Transportation Research Record:*  
14 *Journal of the Transportation Research Board*, Vol. 1887, 2004, pp. 153-160.
- 15 19. McCarthy, K. J. The Effects of Student Activity Participation, Gender, Ethnicity, and  
16 Socio-Economic Level on High School Student Grade Point Averages and Attendance,  
17 2000. Presented at National Association of African American Studies & National  
18 Association of Hispanic and Latino Studies, Colorado, 2000.
- 19 20. Alexnder, K., D. Entwisle, and N.S. Kabbani. The Dropout Process in Life Course  
20 Perspective. *Teachers College Record*, Vol.103, 2001, pp. 760-882.
- 21 21. Nashville MTA StrIDe Youth Mobility Program - *StrIDe FAQs, Frequently Asked*  
22 *Questions*. 2013. <http://www.nashvillemta.org/Nashville-MTA-Stride-Program.asp>  
23 Accessed July 31, 2015.
- 24 22. ORCA CARD / METRO BUS PASS Student Transportation Program. 2013.  
25 [https://www.orcacard.com/ERG-Seattle/p1\\_001.do](https://www.orcacard.com/ERG-Seattle/p1_001.do) Accessed July 31, 2015.
- 26 23. Qualtrics Survey Software. Qualtrics Labs, Inc., Provo, UT. Version 2009.