TACOMA HOUSING AUTHORITY

REVIEW OF LITERATURE ON THE EFFECT OF MOBILITY ON SCHOOL ACHIEVEMENT

October 29, 2009

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1. INTRODUCTION

. . . educational problems in poor inner-city neighborhoods cannot be addressed without also responding to the social and economic conditions in the communities where schools are located. It is unfair and unrealistic to expect schools to raise test scores and focus narrowly on the task of educating children when a broad array of unmet non-academic needs (e.g., food, housing and health care) invariably affect their ability to learn. Put more simply, we cannot address educational issues in a social vacuum, and we cannot treat all schools or children the same when we know that life is much harder for some children than for others. -- Pedro Noguera, *City Schools and the American Dream,* (2003).

Since the 1960's, educational and social researchers have been exploring the impact of a range of variables which are beyond the influence of public schools, but which have a profound effect on the educational outcomes of children, especially children of poverty and children of color. One of the variables which has received considerable attention is the relationship between academic outcomes and stability in housing. Given the interplay of demographic variables and housing stability, it is difficult to parse out the exact contribution of housing to learning outcomes, but the sheer number of students of poverty (12.1 million people under age 18 nationwide in 2002 [National Center for Educational Statistics]) creates a database which researchers have used to conduct a wide variety of studies from which reliable conclusions can be drawn.

Rumberger, et al. (1999) identify three aspects of student mobility – incidence (the rate at which students move), consequences, and causes. Students change schools or leave school for a wide variety of reasons, and the schools which they leave do not always know why they left. This makes it difficult to determine exactly which of mobility's many causes has the greatest impact on student outcomes. A longitudinal study of student mobility in the Chicago Public Schools (Kerbow, 1995, cited in Reynolds, Chen, and Hebers, 2009) found that 28% of mobility was due to change in housing, and an additional 30% was due to a combination of housing and school-related circumstances such as dissatisfaction with the school.

Whatever the root causes of mobility, the perceived causal effect of instability in school enrollment on decreased student outcomes has led to a substantial amount of research, a representative sample of which is reviewed in this report.

2. DATA SOURCES

Data for this report were collected from a search of national databases of educational statistics, the US Department of Education's Education Resources Information Center (ERIC), an internet search for related studies, and data available from the Tacoma Public Schools. All of the studies reviewed in this report which impute causality between housing stability and student outcomes are multivariate studies which control for a variety of factors also related to student outcomes. The variables included differ depending on the study. Many of the studies are meta-analyses which draw conclusions based on compiling statistical results from a number of related studies.

3. EXTENT OF MOBILITY

For the purpose of this review, school mobility is defined as a child changing school for reasons other than promotion to another grade level. This includes students who change due to choosing to attend another school for a more desirable program, transportation issues, and a wide variety of other causes. School mobility does not necessarily imply a change in residence, although that is often a contributing factor. "Over their entire elementary and secondary careers, most students (in the United States) make at least one non-promotional school change" (Rumberger, 2002).

The United States has one of the highest rates of residential and school mobility in the industrialized world (Long, 1992). Between 2007 and 2008, one in eight Americans changed residences, which is over 35 million people. While annual mobility rates have typically exceeded 14% over the past two decades, cumulative rates over multi-year periods exceed 20%. Among school-age children, 8.8 million – 14% of 5-to 19-year-olds – changed residences between 2002 and 2003, the most recent data available. (All data from U.S. Census Bureau, 2009.)

"With roughly two-thirds of residential moves requiring a change of schools, and many other school transfers occurring without residential mobility, the rate of school mobility over a 2-to 3-year period commonly exceeds 30%. The U. S. General Accounting Office . . . reported that 41% of a national sample of third graders changed schools between the beginning of first grade and the end of third grade. The National Center for Education Statistics (*in 2001*) reported that one third of fourth graders in the National Assessment of Educational Progress changed schools in the previous two years due to a residential move. . . . Among a complete cohort of Chicago first graders in 2000 . . . only 25% remained in the same school until eighth grade" (Reynolds, Chen, and Hebers, 2009).

Public school students who drop out are more likely to be low-income, inner city residents. They are more likely to be non-native speakers of English, to already have poor academic success, and to have repeated a grade (Wright, 1999).

3.1 Mobility within Tacoma Public Schools

MOBILITY WITHIN TACOMA PUBLIC SCHOOLS School Year 2007-2008 (Most recent available data)	
Elementary	69.6%
Middle School	54.0%
High School	72.6%
Total District Mobility	67.1%

Source: www.tacoma.k12.wa.us/information/departments/assessment/Pages/EnrollmentStatistics.aspx

Based on the most recent data available (2007-2008), mobility within Tacoma Public Schools varies considerably, from a low of 25.1% at Meeker Middle School to a high of 121.2% at McCarver Elementary. (McCarver has been as high as 179%, in 2005-2006). It

is possible for a school to be over 100% mobility due to multiple student moves within a year. There is a "stable core" of students who stay, while other students move in and out including some students who will come and go multiple times during a school year. The school district estimates that only 36% of third graders at McCarver remained with the school from first through third grade. (*http://tinyurl.com/TPSMcCarverDemographics*) The district is currently conducting further analysis of the McCarver mobility statistics.

4. IMPACT ON ACHIEVEMENT

4.1 Academic Indicators

The results of the analyses show a nearly uniformly negative impact of geographic mobility on student achievement; the most negative effects of geographic mobility were found at earlier grade levels (Ingersoll, 1989).

Unfortunately, there is a substantial amount of data to support Ingersoll's claim. In a study of students in the Denver school system in which other factors were controlled, twelfth grade students who had moved more than once performed almost two grade levels below their stable peers on the composite scores of a national test of reading and mathematics. Even first graders, by the end of the year, were already four months behind other first graders who had not changed schools (Ingersoll, et al., 1988). In a more recent study of 1087 low income Black students in Chicago, 73% of whom had changed schools at least once, Temple and Reynolds (2000) found that by seventh grade the mobile students lagged approximately one year behind their non-mobile peers in reading and mathematics, and half of this difference was attributed to frequent mobility.

Because students change or leave schools for a wide variety of reasons, there is not a simple one-to-one correspondence between mobility and school achievement. Rumberger (2002) cites studies pointing to factors that existed prior to the child moving which may play an even greater role in low school performance, including nutrition and health problems, already low academic skills, and retention in grade. ". . . mobile students came from poorer families and had lower academic performance before they were mobile." Also, the structure of the family can mitigate the effect of changing schools. Children from two parent families and families of affluence show significantly less academic impact. See also Wright (1991) and Tucker, et al. (1998). Other studies however (e.g., Ingersoll, et al., 1988), have found that controlling for socioeconomic variables did not alter the negative relationship between mobility and achievement.

It is clear from the many studies on this issue, however, that mobility in itself creates barriers to school success, both on the part of the student and the school staff. "Problems related to student mobility are inconsistent curricula, difficulty of student needs assessment, and the primary assignment of responsibility to teachers. . . . With the exception of migrant students, there are no special educational services or school programs for students who move. The major

responsibility for working with these students rests with teachers" (Lash and Kirkpatrick, 1990).

In addition, highly mobile students are much less likely even to show up for assessments. Wasserman (2001) found students who had moved twice in their educational career are three times less likely to participate in (Canadian) provincial exams, and those who moved four or more times are up to ten times less likely to show up for the test, depending on their grade level.

When they do show up for assessments, there is a clear, strong, negative correlation between test performance and mobility as shown in the following table.

Correlation of School Achievement with School Mobility Index			
	Grades 1-3	Grades 4-6	Junior High
	Acceptable Standard*	Acceptable Standard	Acceptable Standard
English Language Arts	-0.43	-0.54	-0.42
Mathematics	-0.42	-0.50	-0.49
All correlations statistically significant.			
* Acceptable Standard on Alberta Provincial exams = minimum passing score			

From Wasserman (2001)

A negative correlation in the order of 0.4 – 0.5 is a powerful predictor that a student who is mobile is much less likely to do well on assessments. Of course, correlation is not determination – many mobile students do well, and many stable students do poorly. However, the strong correlations show that within the population of mobile students, the more changes of school a child makes, the less likely she/he is to do well on assessments.

4.2 Dropout Rate

Another indicator of the impact of any social variable on students is the rate at which they graduate from high school. Research conducted by Reynolds, et al. (2009) demonstrated that each instance of school change increases the likelihood of dropping out by 8.4%. This should be interpreted in the context of an already alarming dropout rate nationally and locally. In 2007, the most recent available data, 77.6% of Tacoma Public Schools students graduated on or after their expected graduation year compared to 77.0% statewide. (See the Appendix for two year [Figure 1] and extended [Figure 2] graduation rates from Tacoma Public Schools over time. Figure 3 shows graduation rates by race/ethnicity.)

Rumberger and Larson (1998), based on an analysis of the National Educational Longitudinal Survey which includes tens of thousands of a representative cohort of students across the United States, reported, ". . . students who made even one nonpromotional school change between the eighth and twelfth grades were twice

as likely to not complete high school as students who did not change schools." (*Emphasis added*) Astone and McLanahan's (1994) findings support this. In their study of family conditions, ". . . as much as 30% of the difference in the risk of dropping out between children from stepfamilies and children from intact families can be explained by differences in residential mobility."

4.3 Non-Academic Indicators

Besides test scores and dropout rates, many less measurable features of education are also impacted by high student mobility, not the least of which is the interaction of the teacher with her/his students, and the ability of the student to maximize the learning opportunities in the classroom. Engec (2006) also found that suspension rates were significantly higher for students who had changed schools within a school year.

When a child leaves or a new child arrives during the school year, it can be very disruptive. "Teachers have the challenge of integrating newcomers into established classes. New students need to become part of a class that has already built a history, including a common understanding of rules and routines and a shared knowledge base. Complicating this is the fact that a newcomer's educational history may not match that of the class" (Lash and Kirkpatrick, 1990).

In his review of the impact of mobility on schooling, Wasserman (2001) includes the following:

- Teachers are forced to spend more time on review, and favor shorter term, less integrated teaching strategies.
- Attempts to monitor student performance may become meaningless if the population tested one year has largely changed by the next year. *(Note: Wasserman wrote this prior to the implementation of the NCLB accountability model which requires year-to- year grade level comparisons, not tracking of the same students over time.)*
- Staffing decisions are more difficult because of changing and unpredictable enrollment.
- Teachers face a feeling of loss of accomplishment when a student in whom they have invested considerable effort leaves when the efforts are just beginning to show benefits.
- The lack of prompt transfer of student records can result in inappropriate placement of students.

While it is difficult to quantify these concerns, it is clear that for some students the non-academic factors can have a substantial impact on their social as well as academic success.

5. RESEARCH ON STABILIZING HOUSING

Although stabilizing housing has been a major concern in the United States for some time, it became even more critical since the fall of 2008 due to the effects of the recession and the tremendous impact of the credit crisis and declining wealth on home ownership.

There are consequently a great many initiatives from the local to the federal level (U.S. House Speaker Nancy Pelosi prominently features housing on her website -- *Stabilizing Housing Is Key to America's Economic Recovery* [http://speaker.house.gov/newsroom/reports?id=0037)]) – but in conducting this review I was unable to find any studies on mobility in which efforts to stabilize housing were associated with attempts to improve school outcomes. This by no means indicates no such work has been done, just that any such studies or reports were easily accessible through a search of the sources cited above. In his meta-analysis of mobility studies, Rumberger (2002) writes, ". . . much can and should be done to prevent some types of mobility, especially those caused by school factors, and to mitigate some of the harmful effects from mobility," but he did not cite any studies in which this had been tried and evaluated.

There are indirect indicators of the difficult of the challenge of affecting student outcomes through housing. Liebman, Tenney, & Saegert of City University of New York in a 2009 study of 30 years of urban development in Brooklyn, concluded that, "With MGV *(Marcus Garvey Village)*, UDC *(the Urban Development Corporation)* had mixed success in meeting the goals of its social experiment. It contributed to stabilizing housing conditions in the neighborhood but not to stabilizing the community at-large. Education statistics have not changed that much over thirty years. In 1970, 20 percent of residents in the area graduated from high school and in 2000 only 33 percent had done so."

Geoffrey Canada, founder of The Harlem Children's Zone (HCZ), a community based charter school which has been recognized as a best practice by President Obama and the Department of Housing and Urban Development, argues for the need for stable housing (and cites strong partnerships with housing in supporting the HCZ academic program), but the HCZ report of student outcomes does not indicate an attempt to manipulate housing stability as a variable in increasing student success. *(www.hcz.org/images/white_paper-edit_exsum12_12_08.pdf)*

Rogers, et al. (2009) in the most comprehensive review of the research on mobility and achievement in school that I was able to find, did not include any measure of the stability of housing; their sole indicator for mobility was the number of times the children changed schools. They concluded, "Another limitation of the reviewed studies was the lack of investigation of the mediators or mechanisms through which mobility led to lower academic success."

6. CONCLUSION

Wasserman (2001) summarizes his review of the literature on student non-promotional mobility in this way. "The conceptual relationship between student movement and achievement is clear: moving disrupts the student's education, which is turn lowers achievement."

It is clear from the research reviewed here that school mobility, whether singly or in combination with other factors in a child's life, can have a significant negative effect on success in school. When students stay in the same school they do better in academics and

also in their ability to build a positive relationship with teachers and classmates. Teachers have a much easier time working with their students when the class is stable, to the benefit of all students.

While no research was discovered in which housing was stabilized in a direct attempt to improve student school outcomes, the strengths of the correlations between these two variables suggests that should such an intervention be carried out, it could significantly improve outcomes for many students.

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APPENDIX

Graduation Rates for Tacoma Public School Students

Figure 1

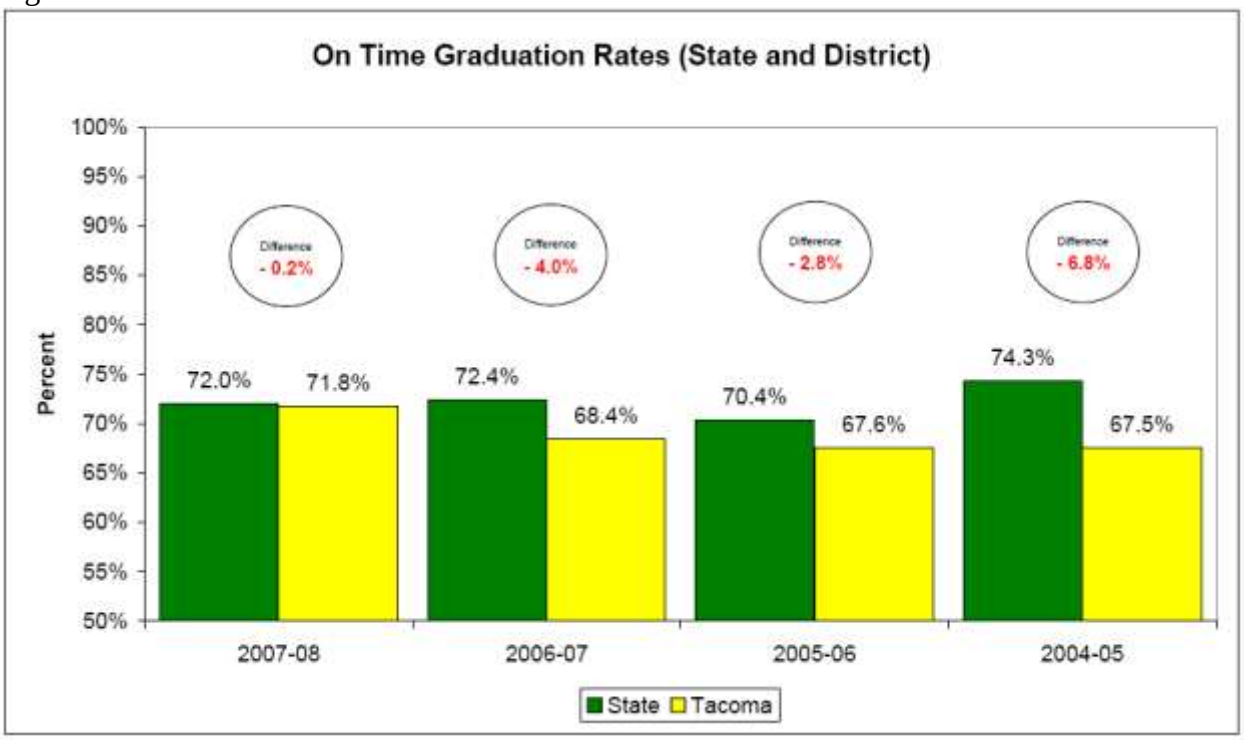


Figure 2

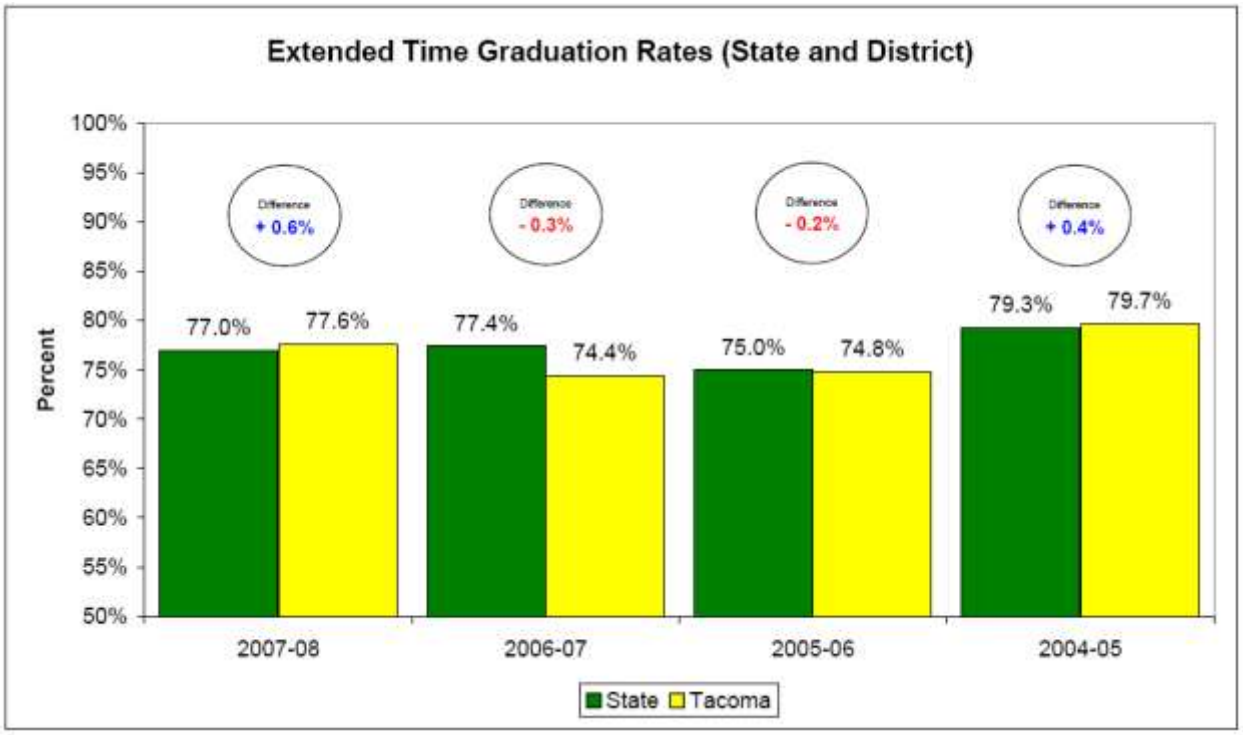
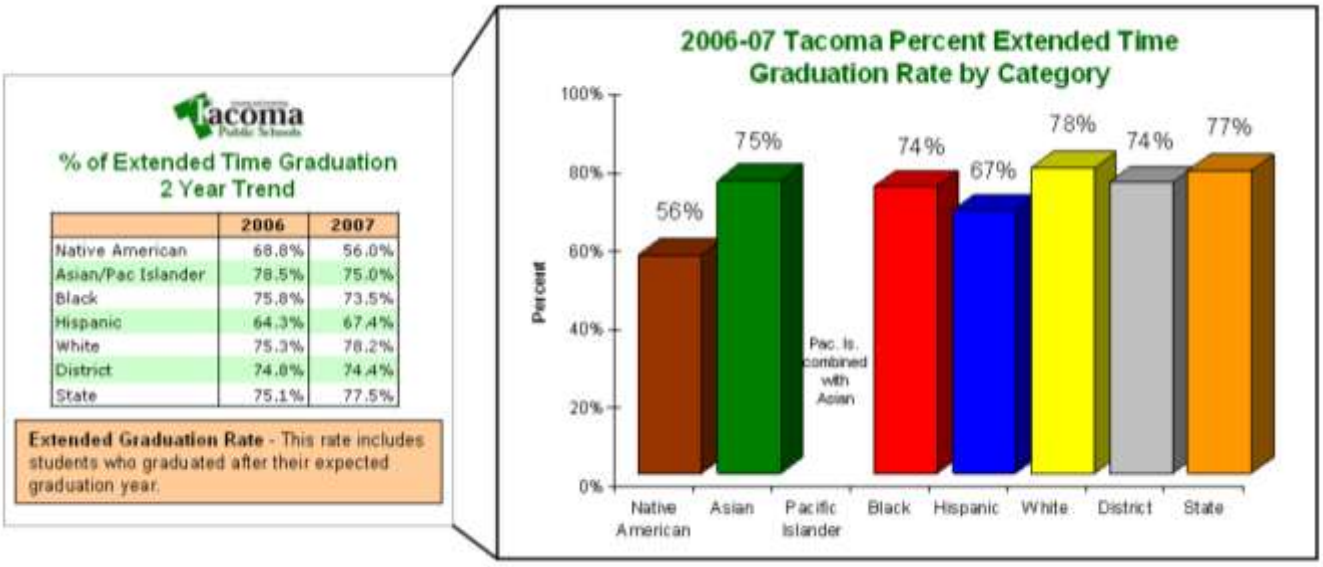

Extended Time Graduation Rates (State and District)
100%
95%
90%
85%
80%
75%
70%
65%
60%
55%
50%
Percent
Difference + 0.6%
Difference - 0.3%
Difference - 0.2%
Difference + 0.4%
77.0%
77.6%
77.4%
74.4%
75.0%
74.8%
79.3%
79.7%
2007-08
2006-07
2005-06
2004-05
State
Tacoma

Figure 3


Tacoma Public Schools
% of Extended Time Graduation
2 Year Trend
2006
2007
Native American 68.8% 56.0%
Asian/Pac Islander 78.5% 75.0%
Black 75.8% 73.5%
Hispanic 64.3% 67.4%
White 75.3% 78.2%
District 74.8% 74.4%
State 75.1% 77.5%
Extended Graduation Rate - This rate includes students who graduated after their expected graduation year.
2006-07 Tacoma Percent Extended Time Graduation Rate by Category
100%
80%
60%
40%
20%
0%
Percent
56%
75%
74%
67%
78%
74%
77%
Pac. Is. combined with Asian
Native American
Asian
Pacific Islander
Black
Hispanic
White
District
State