DOES IMMIGRANT ADVANTAGE REMAIN STABLE THROUGHOUT ELEMENTARY SCHOOL?

by

Mayra Parada

A Thesis
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Does Immigrant Advantage Remain Stable Throughout Elementary School?

A Thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts at George Mason University

by

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Bachelor of Science
Virginia Commonwealth University, 2014

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DEDICATION

This is dedicated to my loving partner Donald Tweedie III who spent countless of hours cheering me on, my family who's struggles as immigrants encouraged me every step of the way, and all my friends from Bailey's Crossroads and Seven Corners. This is for y'all.

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ABSTRACT

DOES IMMIGRANT ADVANTAGE REMAIN STABLE THROUGHOUT ELEMENTARY SCHOOL?

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There are many risk factors, including low-socioeconomic status, gender, and teacher/school perceptions, which impede in the academic achievement of immigrant students. Despite these risk factors, recent research shows that immigrant students often outperform their native U.S.-born peers academically. This thesis examined the differences in academic outcomes during third through fifth grade between immigrant students and native students. Additionally, academic outcomes among immigrant generation (first-generation vs. second-generation) are compared. Data will be examined from the Miami School Readiness Project (MSRP; Winsler et al., 2008), a cohort sequential, longitudinal project that recruited children receiving subsidized childcare and attending public school pre-K. Outcome variables include FCAT math and reading scores, school suspension, school retention, attendance, and end-of-year grades. The following research questions were answered: Will the immigrant advantage continue to

manifest itself in academic outcomes (end-of-year grades, FCAT math and reading scores, attendance, suspension, and retention) for students over time (from third to fifth grade)? Does gender or race moderate the size and timing of immigrant advantage? Hierarchical Linear Models (HLM) showed immigrant advantage in terms of initial status at 3rd grade (immigrants higher in FCAT math and reading, end-of-year grades, and attendance), but these advantages became smaller by 4th grade and by 5th grade immigrant disadvantage was seen for FCAT math and reading, and end-of-year grades. There were no significant gender by immigrant status interactions. However, there were race by immigrant status interactions for FCAT math and reading, end-of-year grades, and attendance. Black and Latino immigrants initially scored higher in third grade, but decreased over time. However, Latino immigrant decreased at a faster rate compared to Black immigrants in fourth and fifth grade. It is critical for researchers to explore what is going on in 4th and 5th grade that make 1st generation immigrants take a turn for the worst and lose their immigrant advantage. Black immigrant advantage should be further explored and studied. These results suggest that immigrant advantage may look differently for different ethnic groups. Latino immigrants may need more resources and support compared to Black immigrant students. Future studies should focus on disentangling these issues to understand and improve the educational experience of all immigrant students.

OVERVIEW OF IMMIGRANTS

According to the U.S. Census Bureau (2010), children with at least one immigrant parent account for 25% of the population of children in the U.S., growing 33% from 2000 to 2013. Immigrant households are more likely to include children under 18 as compared to their native-born counterparts, bringing many immigrant students into school systems. The growing population of immigrant children in the school system has led to the number of English Language Learner (ELL) students ages 5 and over in the United States to rise from 14.0 million to 25.1 million from 1990 to 2013 (Zong & Batalova, 2015). With the influx of immigrant students, it is important to note the unique challenges, rewards, and opportunities that this population faces in the U.S.

Immigrant generation can be defined in different ways. Pong, Hao, and Gardner (2005) categorized immigrant students based on age of arrival. Foreign-born students arriving prior to age 6 were categorized as the preschool-generation, foreign-born students arriving after age 6 were categorized as first-generation students, and second-generation students were students born in the United States who have a parent born outside of the U.S. Glick and Hohmann-Mariott (2007) categorized students similar to Pong and Hao (2007) with the exception of the preschool-generation labeled as the 1.5 generation. For the purposes of this study, immigrant students will be categorized based on the most common categorization found in the literature, which is based on place of

birth of the child and parent (De Feyter, Curby, & Winsler, 2015; Diermer et al., 2014; Palacios et al., 2008). That is, first-generation students are foreign-born students with foreign-born parents. Second-generation students are U.S.-born students with at least one foreign-born parent.

CHALLENGES FOR IMMIGRANT STUDENTS

Immigrant families are more likely to live in poverty compared to native households (U.S. Census Bureau, 2010). When broken down by generation, 28% of first-generation immigrants are living in poverty as compared to 25% of second-generation immigrants and 19% of native U.S.-born families (U.S. Census Bureau, 2010). Crosnoe and Turley (2011) reported that immigrant students also tend to live in low-income neighborhoods compared to native-born White students. Immigrant students in low-income areas will likely attend schools with lower resources, larger class sizes, and lower academic performance (Crosnoe & Turley, 2011).

Socioeconomic status plays a significant role in the academic outcomes of all children. Children living in low-income communities are at a higher risk for problems with academic performance. Students that are part of low-income families are at a greater risk for lower reading and math scores, grade failure, and dropping out of school (Child Trends, 2015). During the preschool years, children living below the poverty line are less likely to complete school compared to children who experience poverty in later years (Brooks-Gunn & Duncan, 1997). Yeh, Kim, Pituc, and Atkins (2008) found that economic hardships significantly affect school outcomes for immigrant students. Due to low education levels often found in some immigrant parents, many are forced to work laborious jobs and often work long hours, leaving limited time with their children. Yeh

and colleagues (2008) note how immigrant students are expected to take on several roles, including caretaker for younger siblings. Immigrant students sometimes become frustrated with school and decide to drop-out to work to contribute to the family income.

There are many other risk factors that immigrant students face that affect school performance. One of the most important obstacles that some immigrant students face when entering school is limited English language skills. Overcoming language barriers is especially difficult for Non-English speaking immigrant students due to the lengthy process of learning a second language. According to Bowman-Perrott, Tretter, and Kinny (2012), fully mastering a second language takes approximately 7-10 years, and limited English proficiency is related to poor school outcomes, such as high school dropout and grade retention. The amount of time it takes to become proficient in a second language not only has immediate effects on academic outcomes, but can also have long-lasting effects. Students behind in English skills often fall even more behind academically as time passes (Bowman-Perrott et al., 2012).

Ardasheva, Tretter, and Kinny (2012) confirmed the importance of English language proficiency in the academic performance of immigrant students. In their study, Ardasheva and colleagues (2012) recruited former English Language Learners (ELL; students who are no longer enrolled in an English language program), Native English Speakers (NES; students with English as a native language), and current ELL (students currently enrolled in an English language program) middle school students and compared their scores on reading and mathematics assessments. Former ELL students received higher scores in reading (English) compared to current ELL students and NES students,

after controlling for gender, age, and student- and school-SES status. Former ELLs also performed higher on mathematics compared to current ELL students, confirming the importance of English language proficiency in not just reading and writing, but also in other subjects. The results of the study confirm that it is not the ELL status per say that has an effect on academic outcomes, but rather limited English proficiency. The superior performance of former ELLs shows the advantage that immigrant students (as many immigrant students are also ELL students) have once they become proficient in English.

Halle, Hair, Wadner, McNamura, and Chien (2012) also confirmed the importance of English proficiency in a national sample of first-time kindergarten children. Children were assessed in reading and mathematics skills from kindergarten through eighth grade. ELL students who acquired English proficiency by the start of kindergarten (classified as achieving early English proficiency) received similar if not higher scores on reading and math assessments compared to native-English speakers. Students who acquired English proficiency later in first-grade (classified as achieving English proficiency later) received lower reading and math scores compared to native-English speakers. These results suggest that English proficiency is not only important for language-related assessments, but also influence other subjects over time.

Racism, discrimination, and low expectations create risk for immigrant students, as well, specifically for immigrant students that belong to historically underrepresented and underserved groups. Teacher perceptions and expectations are crucial for immigrant students. Preconceived notions about certain groups of people can lower school performance for students who belong to certain groups (DeCastro-Ambrosetti & Cho,

2011). Self-identification into historically oppressed ethnic/racial groups also comes with discrimination. Rong and Brown (2002) explain the multiple avenues of discrimination that Caribbean-Black and African immigrant students face when settling in the United States. Caribbean and African immigrants that identify as Black experience both the discrimination Black Americans face in the U.S. and also the discrimination and low expectations that many teachers may have of immigrant students. Latino students also face similar discrimination and racism at schools. Martinez, DeGarmo, and Eddy (2004) explored the discrimination faced by Latino students using data from the Oregon Latino Youth Study. Latino students perceived higher levels of discrimination than non-Latino students. Latino students were more likely to drop-out of school and have lower GPAs. In a qualitative study involving 10 focus groups with immigrant students, parents, teachers, and other school personnel, Yeh et al. (2008) found that Chinese immigrant students experienced microaggressions (or everyday slights) at their schools. Students expressed feeling discriminated and marginalized due to lack of proper institutional resources provided by school. Thus, many felt unwelcome and dropped out of school. Immigrant students may carry stress due to premigration situations, economic stress, and documentation status (Goodman, Vesely, Letiecq, & Cleaveland, 2017; Vesely, Letiecq, & Goodman, 2017). Additionally, immigrant students may be more inclined to take adult responsibility such as translating, childcare, and becoming cultural brokers for parents (Kam & Lazarevic, 2014). The relationship between race and immigrant status is also important to note. Previous research has shown that there is a difference between the degree of immigrant advantage between Black and Latino immigrants (Parada & Winsler,

2016). Black immigrants may have skills that give them a bigger advantage compared to Latinos, such as English proficiency. Thus, race is an important factor to note when looking at immigrant outcomes.

Immigrant boys in particular are at high-risk for academic failures due to experiences at school and cultural norms found in the home. In a chapter dedicated to immigrant boys' experiences in schools, Suarez-Orozco and Qin-Hilliad (2004) explain the experiences of Latino immigrant students, specifically male Latinos, in school. Latino immigrant male students are often perceived as being oppositional and defiant by teachers and school administrators. The perceptions of Latino immigrant students often lead to negative interactions and relationships with teachers and school administrators. Negative interactions lead to "policing" of Latino immigrant students, leaving male immigrant students with an impression of schools as "prisons," and lowering academic motivation, similar to experiences shared by Black students. Suarez-Orozco and Qin-Hilliad (2004) also mention how teachers hold higher expectations for immigrant girls than boys. Feliciano (2012) explored the female advantage in immigrant students. Feliciano (2010) found that traditional gender norms/roles in the home and at school influenced academic attitudes for boys and girls. Boys spent less time on homework, watched more television, and had lower educational expectations. At school, boys had negative perceptions of school personnel, similar to findings of Suarez-Orozco and Qin-Hillian (2004). Unlike boys, girls were more likely to be limited in certain activities than boys, such as spending time with friends or dating. These limitations set by parents' lead girls to associate less with negative peers and focus more on school (Feliciano, 2010).

Immigrant Advantage

Despite these numerous risk factors that immigrant student's face, recent research shows that immigrant students are often performing past their U.S.-born peers, showing an immigrant advantage at least early on in school. The immigrant advantage can be observed in two ways: 1) between immigrants and non-immigrants, and 2) between immigrant generations. There are many studies showing the immigrant advantage between immigrants and non-immigrants. Mclanahan and Kieran (2014) observed immigrant advantage in health behaviors during the pregnancy of immigrant and native-born mothers in the United States and the United Kingdom. Data collected from mothers included health behaviors such as smoking, prenatal care, and breastfeeding. Infants born to immigrant mothers had healthier birth weights than those born to native-born mothers. This is due in part to the differences in health behaviors observed. The results showed that 18% of native-born mothers smoked during their pregnancy compared to 4% non-Hispanic immigrant mothers and 1% for Hispanic immigrant mothers. In the United States, immigrant mothers were more likely to breastfeed compared to native-born mothers, especially for Hispanic immigrant mothers.

De Feyter and Winsler (2009) explored immigrant advantage in a sample of low-income young children in Miami. They found that immigrant children received higher scores on socioemotional and behavioral strengths assessments compared to non-immigrant children at age 4. Similarly, De Feyter and colleagues (2016) examined later academic outcomes of low-income students from immigrant and non-immigrant students. End-of-year grades from elementary school up to 4th grade were observed for differences

between immigrant and native students. Immigrant students received higher scores in standardized math and reading scores (in English) in 3rd grade compared to non-immigrant students. Lastly, Rong and Brown (2002) also noted that the immigrant advantage is seen within certain racial groups, with Caribbean and African immigrant students outperforming native-born African-American students despite living in similar socioeconomic neighborhoods and schools.

The immigrant advantage is not only observed between immigrant students and native-born students, but is also noted generationally. Pong, Hao, and Gardner (2005) conducted a study to see whether school performance was influenced by neighborhood and school conditions and if these varied by nativity status. First-generation students were found to have higher GPAs than second-generation immigrant students despite living in similar low-income neighborhoods and attending similar low-income schools. Similarly, Crosnoe and Lopez Turley (2011) noted that in the National Education Longitudinal Study (NELS), immigrant students (who were still in school) outperformed their peers with U.S.-born parents in math and science assessments in eighth and tenth grades. First-generation immigrant students outperformed second-generation students in the same math and science tests. Likewise, with the Early Childhood Longitudinal study, Kindergarten data (ECLS-K), Palacios, Guttamannova, and Chase-Lansdale (2008) detailed the disparities in reading scores between each generation of students. In late kindergarten, first-generation students were reported to have higher reading scores than their third-generation peers. This advantage remained stable through the end of third grade.

De Feyter and colleagues (2016) also found results that indicated an immigrant advantage by generation. First-generation students consistently received higher end-of-year grades than second-generation students, and first-generation students had lower rates of grade retention than second-generation students. First-generation students had higher academic achievement and school engagement than second-generation students observed in studies (Diermer et al., 2014; Rosenbaum & Rochford, 2008) with participants as old as 10th grade.

It is important to note that with the exception of the two studies mentioned previously, much of the research conducted on immigrant advantage centers around young children and those primarily of Mexican origin. This is due to the use of cross-sectional studies with a younger aged sample and samples used from areas with predominantly Mexican populations. Longitudinal research is necessary to observe how the immigrant advantage manifest itself over time.

CLASSICAL ASSIMILATION THEORY AND THE IMMIGRANT PARADOX

There are many theories about the assimilation process in the United States since the early wave of immigration from Europe happened during the pre-WWII era. The theory of classical assimilation was first proposed by Warner and Srole (1945). According to Warner and Srole (1945), assimilation, the process of integrating into a dominant culture, is a necessary process for immigrants to climb the socioeconomic ladder and successfully become a part of the middle class. In essence, assimilation and acculturation are necessary steps for immigrants to be successful in the United States, expecting later immigrant generations to find more success than first-generation students.

Classical assimilation theory would suggest that with more immigrant generations or time spent in the U.S., higher academic achievement would result due to assimilation and acculturation, but this does not always seem to be the case with immigrant students. Despite immigrant students having an initial advantage, research shows that the advantage tapers off over time and paradoxically becomes a disadvantage. This change over time from immigrant advantage to immigrant disadvantage is referred to the "immigrant paradox" (Crosnoe & Lopez Turley, 2011; Garcia-Coll & Marks, 2012). As discussed earlier, first-generation students often have higher levels of academic achievement than second-generation students despite having higher rates of poverty and

less English proficiency than second-generation students (Rosenbaum & Rochford, 2008).

There is, however, occasional support for assimilation theory. Greenman, and Xie (2008) conducted a study to see whether assimilation influenced the psychological well-being of adolescents and educational outcomes. Results of the study found that high school graduation rates were higher for second- and third-generation students compared to first-generation students. College enrollment rates favored later generations of students. Greenman and Xie (2008) conclude that assimilation did have a positive effect on academic outcomes of immigrant students.

Suarez-Orozco and Qin-Hillad (2004) described how adolescent male Latino immigrant students tend to underperform compared to their peers due to perceived racism and discrimination in school. Yeh et al. (2008) noted how high school immigrant students were less engaged in school and more likely to drop-out due to financial strains on the family compared to non-immigrant students. This trend of negative outcomes observed in middle and in late adolescence in contrast to many studies where it is observed that immigrant students succeed and surpass their native U.S.-born peers in early and late childhood. Despite the numerous risk factors that many immigrant students face, especially in adolescence, there is very limited longitudinal research on the immigrant paradox, specifically with the regard to the immigrant disadvantage observed in older students and those from different countries of origin, race, and gender. Thus, with the mixed results of studies concerning the immigrant paradox in adolescence, the age range of middle childhood should be further explored.

There are numerous factors that can explain why the immigrant paradox occurs. Crosnoe and Lopez Turley (2011) explain that first-generation immigrant students have access to community support in their own ethnic communities, communities that second- and third-generation students may not have access to due to assimilation. Second, first-generation immigrant students receive positive messages of educational attainment. According to Glick and Hohmann-Marriott (2007), immigrant parents have higher academic expectations which lead to higher academic achievement for immigrant students. Lastly, parents present students with narratives of parental and familial struggle before settling in the United States. Exposure to these narratives leads to higher educational aspirations and establishes a rigor for first-generation immigrant students to "give back" to their parents for their hard work and also instill an emphasis on educational attainment (Ceballo, Maurisi, Saurez, & Aretakis, 2014).

There is a lack of longitudinal studies in this field. There is evidence of the immigrant paradox/advantage in early childhood (De Feyter et al., 2009) and an immigrant advantage for first-generation students compared to second- and third-generation students. However, there are mixed results with academic and school outcomes for adolescents, with some studies finding evidence of the immigrant paradox/advantage (Rosenbaum & Rochford, 2008) and others not (Greenman & Xie, 2008). Therefore, there is a need for longitudinal studies regarding immigrant students in middle childhood.

THE PRESENT STUDY

The present study examined data from the Miami School Readiness Project (MSRP), a large-scale 15-year cohort sequential, longitudinal project, and a community and university collaboration in the Miami-Dade area (Winsler et al., 2008). This project assessed low-income, ethnically diverse children on demographic information and school-readiness at pre-kindergarten and has followed the same sample of children up through high school. For the purposes of this study, demographic information such as nativity status, poverty status (determined by whether students receive free or reduced lunch), English Language Learner (ELL) status, and gender will be analyzed to see later longitudinal academic outcomes of immigrant students in grades 3rd, 4th, and 5th. Miami has a diverse population with many different languages spoken. The most common language used is Spanish, English, and Creole, with the majority of its residents speaking another language other than English (De Feyter et al., 2015).

Due to the increased risk as immigrant students age and the already high risk factors associated with immigrant students, the focus of this paper will be on immigrant students during 3rd, 4th, and 5th grade. There is limited longitudinal research that notes the immigrant paradox over time. De Feyter et al. (2016) described the academic outcomes of immigrant students up to 4th grade using one cohort of data from the Miami School Readiness Project (MSRP). Unlike previous studies on immigrant students using the

MSRP, the present study will have a larger sample of immigrant students. The MSRP with many of the same students in earlier studies will be used in this project, but will also include later outcomes for students since grade five will be included. Additionally, there will be more cohorts present in this study. This project will include five cohorts, all with data completed through grade five. Additionally, with more cohorts, there is more ability to observe retention rates for not only on-track children, but also off-track children (children who were retained at some point or who started school late). Previous MSRP studies on immigrant student subsamples have only included on-track students. Finally, the present study will include new outcomes and demographic information not included in De Feyter and Winsler (2009) or De Feyter et al. (2016), such as suspension and later grade retention.

The following research questions and hypotheses were analyzed for this study:

1) Will the immigrant advantage continue to manifest itself in academic outcomes (end-of-year grades, FCAT math and reading scores, attendance, suspension, and retention) for students over time (from third to fifth grade)? It is hypothesized that immigrant students will have higher grades, lower rates of grade retention, school suspension, higher attendance, and higher standardized test scores than native U.S.-born students at third grade, but that immigrant advantage would lesson over time by fifth grade. It is also hypothesized that first-generation immigrant students will have better outcomes compared to second-generation students at the initial time point (third grade), but that this advantage would decrease by fifth grade.

2) Does gender or race moderate the size and timing of immigrant advantage? Immigrant boys are found to underperform when compared to immigrant girls, and shown to have higher rates of suspension and other negative school outcomes (Feliciano, 2012). Black students are also found to have higher suspension and standardized test scores compared to students of other races. However, this has not been explored between first-, second-, and third-generation immigrant students. I expected that girls would generally do better than boys on most outcomes, but that girls would show larger immigrant advantage compared to boys and that it will taper off more slowly for girls compared to boys. For ethnicity, it is expected that Black immigrant students will outperform Latino immigrant students, following the same pattern as previous research shows (Kao & Tienda, 1995). This is due to previous studies showing that there are differences in immigrant advantage such as Asian students outperforming all immigrant groups. Latinos have been shown to have a lower immigrant advantage compared to Black immigrants (Kao & Tienda, 1995; Parada & Winsler 2016).

METHOD

Participants

The present study includes a subsample of 4,141 participants from a larger study, the Miami School Readiness Project, a large-scale 5-cohort sequential, longitudinal project, in the Miami-Dade area (Winsler, et al., 2008). Participants of our subsample received child care subsidies to attend child care at age four or went to public school pre-K. Participants were later enrolled in the Miami-Dade County Public School (MDCPS) system. Administrative data of students were collected from MDCPS system which allowed us to collect data longitudinally, from kindergarten to 5th grade. For these analyses, data from third grade through fifth grade were used. The sample included first-generation immigrant students (n = 2,582 – 62.4%; foreign-born students with foreign-born parents), second-generation immigrant students (n =746 – 18%; native-U.S. born students with foreign-born parents), and non-immigrant students (n = 813 – 19.6%; native-U.S. born students with native-U.S. born parents).

Table 1 shows the demographic variables separately by group. It is important to note that all children in this sample received childcare subsidies at age 4 and attended some type of childcare/pre-school. Thus, many of our students come from low-income families. For the whole sample, the reported free or reduced price lunch percentages reflect those in fourth grade because it included the most student data. In fourth grade, 11.5% of immigrant students (first- and second-generation immigrants) and 10.0% of

non-immigrant students received reduced price lunch. However, 72.9% of immigrant students and 80.2% of non-immigrant students received free lunch in fourth grade (X^2 (2, N = 4,141) = 21.208, $p < .001$). This indicates that slightly more non-immigrant students come from lower-income households compared to immigrant parents.

Much of the sample consist of ELL students (n = 3,328) compared to non-ELL students (n = 813). When broken down by immigrant group, there are differences in the distribution of ELL status. For first-generation students,95.8 % of these students are ELL students. Similarly, 86.5% of second-generation students are ELL students. However, only 24.5% of third-generation students were ELL students, (X^2 (5, N = 4,141) = 1995.234, $p < .001$). Thus, many of the students received some English Language classes throughout early elementary school.

English proficiency is also noted for third, fourth, and fifth grades. By third grade, 54.0% of immigrant students (first- and second-generation) and 92.0% of non-immigrant students no longer received ESOL classes/services and were categorized English proficient (X^2 (5, N = 4,141) = 399.955, $p < .001$). The same pattern was noted for fourth and fifth grade English proficiency percentages. In fourth grade, 79.7% of immigrant students and 96.4% of non-immigrants were considered proficient and no longer received ESOL class/services (X^2 (5, N = 4,141) = 132.607, $p < .001$). By fifth grade, the majority of the sample were considered proficient in English with 86.8% of immigrant students and 98.4% of non-immigrant students considered proficient (X^2 (5, N = 4,141) = 93.221, $p < .001$).

Procedure

Demographic information was collected through two ways: 1) Parent information gathered at pre-kindergarten and 2) Information gathered from the Miami-Dade County Public School (MDCPS) system. Data on immigrant status were collected though parent information and later administrative data collected from MDCPS. In addition to information of nativity status, participants were limited to those who had fourth grade free and reduced price lunch information and any data for our outcomes in 3rd, 4th, and 5th grades. It is important to note that this study is different than previous studies on immigrant students using the MSRP (De Feyter et al., 2009, *N* = 2,194; De Feyter et al., 2015, *N* = 2,657; De Feyter et al., 2016, *N* = 1,638) because it includes more (mostly first-generation) immigrant students (*N* = 4,453) due to more data on nativity status available, including a child country of birth field from the MDCPS system.

It is noted that the majority of first- and second-generation students are Latino and third-generation students are more likely to be Black. This may be a potential confound, however there is enough data to represent all groups of immigrant students.

Independent Variables

Nativity Status. Nativity status was determined by two sources on information. First, some parents who received subsidies for childcare reported parent and child country of birth in pre-k. The second source came from data collected from MDCPS including just child country of birth. Students with a country of birth other than the United States were classified as first-generation students. Students with their country of

origin as the United States, but whose reporting parent had a country of origin other than the U.S. were classified as second-generation. Finally, third-generation students had to have data for both parent and child country of birth data. Students who had the U.S. as their country of origin and had parents who had the U.S. as their country of origin were classified as third generation, non-immigrants.

Data gathered from the MDCPS system allowed for identification of some first-generation students. Participants who attended subsidized childcare could populate the first-generation, second-generation, and third-generation categories of students. In addition to this three-category system by generation, we also used a two-level variable as well. Immigrant family status was determined as whether the child was a first- or second-generation student. Students categorized as third-generation immigrants were categorized as non-immigrant. Those who were determined as first- or second-generation immigrants received a "yes" ("1") for immigrant family variable. Third-generation students received "no" ("0") for immigrant family variable. Immigrants in our sample came from Cuba (51.2%), South America (22.8%), Non-Cuban Caribbean (12.9%), and Central America (8.3%).

Dependent/Outcome Variables

End-of-Year GPA. Students enrolled in the MDCPS system receive grades from their teachers in their subjects that include English, math, science, social studies, art, music, and physical education. The grades reported by teachers are on the standard scale (A, B, C, D, and F) used in schools. Once we received the administrative data, the original grades were then converted into numerical values using a five-point scale (A = 5,

B = 4, C = 3, D = 2, F = 1). After converting the grades into numerical form, the scores from all courses were averaged to create a single grade-point-average (GPA), ranging from 1-5 for every participant and for every grade.

Standardized Math and Reading Score. Starting in 3rd grade, students begin to take the Florida Comprehensive Achievement Test (FCAT; Human Resources Research Organization & Harcourt Assessment, 2007) to meet the Sunshine State Standard (SSS). The FCAT is found to be highly reliable with an internal consistency using Cronbach's Alpha of .91 for reading and .88 for math (Florida Department of Education, 2004). This assessment is mandatory for all students to take in Florida at the end of 3rd grade and is taken in 4th and 5th grades as well. Certain items in the FCAT are included for Florida students specifically and were based off of the Florida Department of Education's Sunshine State Standard (SSS). The remaining items on the FCAT were included for all students nationally. FCAT scores include a reading and math scale, ranging from 0-500 for each scale. Every year, students receive a report of their scores relative to the state standard. From 2006-2010, students from Florida must receive a score of at least a 284 in reading and a 294 in math (considered achievement level 3) to be considered "at grade level" in third grade according to an achievement scale ranging from 1-5. However, students who scored at achievement level 1 on reading (a score of 258) in third grade are required to be retained.

School Suspension. The number of suspensions are added up at the end of each year for every student. The total number of suspensions is a combined number that includes both indoor and outdoor suspensions. This number indicates the number of

suspensions that child has had each school year. Afterwards, it was converted into a dichotomous variable that indicated whether a student was ever suspended in each grade. If a student had more than a zero in the number of suspensions variable, then they were coded as "1", meaning yes that students has been suspended at least once. If a student had a zero and has attended that school year, then they were coded as "0". The suspension variable will include data for third, fourth, and fifth grades.

Retention. Retention is a binary code, meaning that students are classified as either retained or promoted to the next grade level each year. Retention is determined by data obtained in two school years. For example, if a child had information in third grade and the following year has information in third grade again, then that is an indication of retention. A retained student ("1") indicated that the student appeared on time and received end-of-year grades in the present grade. However, in the following year, the student returned to the same grade level and received end-of-year grades for that same grade. If a student is promoted ("0"), the student appeared on time and received end-of-year grades for one grade and appeared the following year in the next grade level and received end-of-year grades for the grade.

Attendance. Attendance is a continuous variable that contains a corresponding variable for each grade. The total number of days absent was calculated at the end of the school year and made into one continuous variable. A continuous variable was made for each grade. The total number represents the number of days absent from school.

Missing Data and Data Analyses Plan

Table 2 lists missingness for all variables. Missingness ranged from 0 – 5.6%. Although I haven't systematically tested yet whether those who were missing data are different from those with data, I did do a series of preliminary analyses that indicated that the means observed from our listwise deletion sample (requiring the participant to have data on the outcome at all 3 time points with a repeated-measures ANOVA) were practically identical to the means received when doing analyses grade by grade with all participants included separately each grade (i.e., multiple regressions for each grade). If those who left the school system and did not give us data in the later grade were very different (say lower functioning) from those who remained, the means would have been different This suggests that despite small difference between sample sizes in each of the analysis/grades, our estimates requiring complete data did not appear to be biased. Further, it should be noted that the HLM growth curve analyses performed still included individuals if they were missing one time point for an outcome (i.e., an intercept and slope was still calculated if a person only had 2 time waves of data).

RESULTS

Hierarchical linear modeling (HLM) was used to analyze a nested data structure in which repeated observations (level-1) were nested within children (level-2), and children where nested within schools (level-3). For dichotomous variables (suspension and retention) Bernoulli HLM analysis was used. The participants included in the HLM analyses were students who had fourth grade free or reduced priced lunch data, Black or Latino only, and did not have missing data on level-2 variables (N = 4,141). The analyses determined initial status in 3rd grade and change over time from grades 3-5. The predictors included standardized test scores, GPA, attendance, suspension, and retention as level-2 predictors. Time-varying covariates included free or reduced price lunch code, English proficiency, and grade as level-1 covariates. Lunch code and English proficiency were grand mean centered for the analyses. The analyses included two steps: the unconditional growth model (step 1) without predictors and covariates, and the full model with outcomes in level-1, covariates in level-2, and school IDs in level-3 (step 2).

Level-1

$$Y = P_0 + P_1*(\boldsymbol{GRADE}) + P_2*(\boldsymbol{PROF}) + P_3*(\text{LUNCH}) + e$$

Level-2

$$P_0 = B_{00} + B_{01}*(\text{FEMALE}) + B_{02}*(\text{BLACK}) + B_{03}*(\text{ELL}) + B_{04}*(\text{IMMI\_FAM}) + B_{05}*(\text{BLACXIMM}) + B_{06}*(\text{FEMXIMM}) + r_0$$

$$P_1 = B_{10} + B_{11}*(\text{FEMALE}) + B_{12}*(\text{BLACK}) + B_{13}*(\text{ELL}) + B_{14}*(\text{IMMI\_FAM}) + B_{15}*(\text{BLACXIMM}) + B_{16}*(\text{FEMXIMM}) + r_1$$

$$P_2 = B_{20}$$

$$P_3 = B_{30}$$

Level-3

$$B_{00} = G_{000} + U_{00}$$

$B_{01} = G_{010}$
$B_{02} = G_{020}$
$B_{03} = G_{030}$
$B_{04} = G_{040}$
$B_{05} = G_{050}$
$B_{06} = G_{060}$
$B_{10} = G_{100} + U_{10}$
$B_{11} = G_{110}$
$B_{12} = G_{120}$
$B_{13} = G_{130}$
$B_{14} = G_{140}$
$B_{15} = G_{150}$
$B_{16} = G_{160}$
$B_{20} = G_{200}$
$B_{30} = G_{300}$

The first analyses contrasted immigrant students (both first- and second-generation) to non-immigrant students. The second analyses contrasted first-generation immigrant students to second-generation students (and excluded nonimmigrants).

Standardized Tests Scores

FCAT Math. The results of the HLM model for FCAT math are displayed. The top of Table 3 shows the FCAT math results at the third grade (initial status) As can be seen in the first row on Table 3 with all predictors included, the intercept coefficient was 297.318 which means that the reference group of students with zeros for the predictors (i.e., males, Latinos, non-ELLs, and non-immigrants) on average started at a score of 297 on the FCAT math test in third grade. The gender coefficient for intercept (2^{nd} row) indicates that females started .253 points higher than males in 3^{rd} grade, but this was not statistically significant. Black students started in 3^{rd} grade 13.078 points lower compared to Latino students, which was significant, ($p < .001$). The coefficients for ELL and immigrant status (immigrant vs. non-immigrant) were significant. Those with ELL status

started 17.949 points higher on average in third grade compared to those who without ELL status (p <.001). Most importantly, and an indicator of immigrant advantage, is that immigrant students started 22.523 points higher on average in third grade compared to non-immigrants (p <.001) on math. The race-by-immigrant status interaction coefficient was not significant, meaning that the immigrant advantage seen in math in 3rd grade was similar in magnitude for Black and Latino students. The gender-by-immigrant interaction was also not significant, meaning immigrant advantage for math was the same for boys and girls in 3rd grade. As mentioned previously, to be considered "at grade level" in third grade, one must score at least 294 to receive an achievement level of 3. For this sample, 75.52% of immigrant students in the sample received an achievement score of 3 or higher in third grade compared to 53.63% of non-immigrant students.

Moving to the middle of Table 3 where change over time is indicated, we see that the slope was significant and positive, showing that students (the reference group – males, Latinos, non-ELLs, and non-immigrants) on average increased their scores in math by 12.21 points in each grade (p <.001). Females student gains over time were 1.54 points smaller each grade compared to males, but the gender slope effect was not significant. Similarly, Black students made 1.94 points slower gains each grade compared to Latino students, but this also was not significant. The slope coefficients for ELL, immigrant status, and the interaction between race and immigrant status were significant. Gains on the FCAT math test for ELL students were 8.40 points slower at each grade compared to non-ELL students (p <.001). Importantly, controlling for all these other predictor variables, the gains over time made by immigrant students were 22.45 points

less at each grade compared to non-immigrant students (p <.001). Since the general rate of change was only 12.21 for the reference group, when the -22.45 coefficient is subtracted from that for immigrant students, it means that immigrant students actually lose ground on the FCAT test over time compared to the average student who is making gains from 3rd to 5th grade. Figure 1 shows that the immigrant student lines starts out stronger, but by fifth grade they do worse compared to the non-immigrants lines. This is strong evidence of the immigrant paradox in that the initial immigrant advantage seen in 3rd grade is reversing over time with immigrant students doing more poorly as time goes by. By fourth grade, only 66.2% of immigrant students scored an achievement level of 3 or above compared to 61.36% of non-immigrant students. In fifth grade, immigrant and non-immigrant students are scoring achievement levels of 3 or above at similar rates, with 48.83% of immigrant students scoring an achievement level of 3 or above compared to 46.6% of non-immigrant students. This mirrors the HLM analyses that as immigrant students are scoring lower each year, non-immigrant students are catching up and scoring higher, ultimately showing no immigrant advantage by fifth grade.

Toward the bottom of the table, the coefficient for the race-by-immigrant status interaction is significant. When controlling for all other predictors, Black immigrants gain an additional 7.66 points in slope at each grade (p <05) compared to Latinos. Figure 1 shows this interaction for FCAT math. Both Black and Latino immigrants show a negative slope over time. However, the slope of decline for Latino immigrants is sharper compared to Black immigrants, showing evidence of both an immigrant paradox (both sets of immigrant students doing worse over time), but a Black immigrant advantage

(Black immigrants declining at a slower rate compared to Latino immigrants). Figure 3 shows that both Black and Latino immigrants are doing worse over time. However, it is observed that Latino immigrants are initially doing better, but Latino immigrants decline faster than Black immigrants catch-up and eventually surpass their Latino immigrant peers. The gender-by-immigrant interaction term was not significant indicating that change over time for all students was similar for boys and girls.

Moving to the bottom part of Table 3, we see that the English proficiency and reduced lunch slopes were significant. Those deemed proficient in English grew at a rate that was 18.49 points higher on the math test compared to those who were not proficient in English. Students who received free or reduced price lunch grew at a rate that was 6.77 points slower on the math exam compared to those who were not in poverty.

Separate but parallel HLM analyses for FCAT math were completed with just immigrant students included to determine whether there were *immigrant generational differences* (first-generation vs. second-generation immigrants). The top of Table 4 shows that the intercept coefficient for students with all zeros for predictors (the reference group – males, Latinos, non-ELLs, and first-generation immigrants) on average was 321.73 (p <.001) on the FCAT math test in third grade (initial status). Gender and race were not significant showing that initial status for immigrants was the same for boys and girls and for Black and Latino students. The coefficients for ELL and immigrant status (first-generation vs. second-generation) were significant. Those with ELL status started 22.145 points higher on average in third grade compared to those who without ELL status (p <.001). Evidence of initial immigrant advantage in third grade is shown in the intercept

coefficient for immigrant generation. Second-generation immigrant students scored 30.484 points lower on FCAT math in third grade compared to first-generation immigrant students (p <.001) (See Figure 2). The interaction terms involving race and gender for initial status were non-significant.

The middle of Table 4 shows the growth over time for the two types of immigrant students. The slope coefficient was significant, showing that students (the reference group – males, Latinos, non-ELLs, and first-generation immigrants) on average decreased their scores in math by 20.09 points at each grade (p <.001). Gender and race slope effects were not significant. The slope coefficients for ELL and generation were significant. ELL students made slower gains by 5.88 points less in the FCAT math test at each grade compared to non-ELL students (p <.05). Second-generation immigrant students (although they started lower than 1st generation immigrants) made faster gains by scoring 33.54 additional points at each grade (a positive gradient) compared to first-generation immigrant students who show a negative slope (p <.001). Figure 2 shows that the first-generation immigrant line starts out higher but decreases and becomes lower compared to the line for second-generation immigrants. The interaction terms involving race and gender for slope were non-significant.

FCAT Reading. The top of Table 5 displays that the intercept coefficient for students with zeros in all predictors (the reference group – males, Latinos, non-ELLs, and non-immigrants) was a score of 312.81 (p <.001) in third grade (initial status). Similar to FCAT math, gender was non-significant. However, the race intercept effect for race was significant (p < .001) with Black students starting about 15 points lower on reading than

Latino student in 3rd grade. The intercept coefficient for ELL (3rd row of Table 5) was significant again - those with ELL status started 12.18 points higher on average in third grade compared to those who without ELL status (p <.001). Of note is that the main effect for immigrant status was not significant for FCAT reading, but the race-by-immigrant status interaction was significant (p < .05). Specifically and as can be seen in Figure 3, Black students scored lower than Latino students in 3rd grade reading but the difference was much greater for non-immigrant students compared to immigrants (p <.05). That is, initial advantage in 3rd grade reading was seen for Black immigrants but not for Latino immigrants. The gender-by-immigrant interaction was not significant. In third grade, 75.2% of immigrant students scored an achievement level of 3 or higher compared to 68.92% of non-immigrant students, showing that immigrant and non-immigrant students scored about the same.

The middle of Table 5 displays that the slope coefficient was significant and negative, showing that students in the reference group on average decrease their scores by almost 13 points each grade (p <.001). Girls' slopes were 3.89 points slower than boys on the FCAT reading test at each grade compared to boys (p <.05). The race effect for slope was not significant. ELL students lost 4.85 points more each year on the FCAT reading test compared to non-ELL students (p <.05). Immigrant students showed greater losses over time, by almost 4.5 more points lost at each grade compared to non-immigrant students (p <.05), which is evidence of the immigrant advantage disappearing over time and becoming an immigrant paradox. To confirm these analyses, a chi-square was conducted between the ordinal achievement levels and immigrant status. In fourth grade, 65% of

immigrant students scored an achievement level of 3 or higher compared to 56.6% of non-immigrant students. Similarly, in fifth grade, 53% of immigrant students scored an achievement level of 3 or higher compared to 53% of non-immigrant students. Figure 3 shows that the Latino immigrant student line starts with similar scores as Latino non-immigrants, but decreases faster over time compared to the non-immigrant line. This is not true, however, for Black immigrants, who maintain their advantage over Black non-immigrants over time. Figure 4 shows the patterns clearly. Latino immigrants started offer higher than Black immigrants and on par with Latino non-immigrants, but the Latino immigrants showed greater declines over time such that by 5th grade, they were lower than both Latino non-immigrants and Black immigrants. More fading of immigrant advantage was seen for Latino than Black immigrants.

For the *generational analyses* within immigrant students, Table 6 shows that the full model revealed that the intercept coefficient for students with all zeros in the predictor (the reference group – male, Latino, non-ELL, and first-generation immigrants) on average scored 302.886 points (p <.001) for the FCAT reading test in third grade. Females scored 5.147 additional points compared to males in 3rd grade (p < .05). Ethnicity was not significant. The coefficient for ELL status was significant. Those with ELL status scored 20 additional points on average in third grade compared to those who without ELL status (p <.05). There were no significant differences in 3rd grade reading performance for 1st and 2nd generation immigrants. Also, none of the interaction terms were significant for initial status.

The middle of Table 6 shows that the slope was significant and negative, showing that students on average decreased their scores in reading by 17.51 points at each grade (p <.001). Gender and race effects on change over time in reading were non-significant The slope coefficients for ELL and immigrant status were significant. ELL students declined almost 6 points faster per year in the FCAT reading test compared to non-ELL students (p <.05). Of note, the negative slopes for second-generation immigrant students over time were 4 points slower compared to first-generation immigrant students (p <.001), evidence of the worse paradoxical declines over time for first-generation students. Figure 4 shows that the first-generation immigrant decline over time is steeper compared to that for second-generation immigrants. There were no interactions for slopes with gender or race.

End-of-year Grades (GPA)

The intercept coefficient in Table 7 reveals that students in the reference group on average received a score of 3.838 (p <.001) in 3rd grade. Girls received initially higher end-of-year grades, receiving 0.22 points higher on average in third grade compared to males (p <.05). Black students received lower initial grades, receiving 0.225 points less compared to Latino students (p <.001). ELL status in 3rd grade was not significant. Importantly, immigrant students (first- and second-generation students combined) received higher end-of-year grades, in 3rd grade, receiving 0.239 points higher on average in third grade compared to non-immigrant students (p <.001). The interaction terms involving race and gender were not significant for initial status.

The middle of Table 7 shows that the slope coefficient was not significant, meaning that there was little change over time in GPA. The gender coefficient for change

over time was not significant, however rate of change by race was significant. Black students showed higher gains over time, receiving 0.053 points higher on end-of-year grades each grade compared to Latino students (p <.05). ELL status and immigrant status were not significant. Figure 5 displays how immigrant students persistently did better compared to immigrant student over time, showing stable immigrant advantage. It is noted that Black non-immigrants are starting to catch up to Black immigrants by 5th grade, but the interaction was not significant.

The *generational* analysis for GPA in Table 8 shows that the 1st generation immigrants on average received a score of 4.178 (p <.001) in third grade. Female immigrants scored 0.198 points higher on average in third grade compared to males (p <.001). Black students received lower GPA's in third grade compared to Latino students (p <.001) in third grade. ELL students followed the same pattern and received 0.099 fewer GPA points compared to non-ELL students (p <.05) in third grade. Of particular note, second-generation immigrant students received 0.228 lower GPAs on average in third grade compared to first-generation immigrant students (p <.001), evidence of an initial first-generation immigrant advantage. The race by immigrant and gender by immigrant status interaction terms were not significant for initial status on GPA.

The middle of Table 8 shows that change over time overall was not significant. Girls grew 0.024 points faster on GPA compared to boys (p <.05). No other slope effects were significant. Figure 6 shows these patterns, in that second-generation immigrant students consistently received lower GPAs over time compared to the first-generation immigrants.

Attendance

The intercept coefficient in Table 9 revealed that students in the reference group on average missed 7.129 days of school (p <.001) in third grade. Gender and race effects were not significant. ELL students missed 0.891 less days of school compared to non-ELL students in third grade (p <.05). Although the main effect for immigrant status was not significant, the race-by-immigrant interaction term was significant. Figure 7 shows that although days absent for Latino students in 3rd grade did not vary much as a function of immigrant status, Black immigrants missed considerably fewer days of school compared to native-born Black students.

The middle of Table 9 shows that the slope was significant, showing that students on average missed 0.556 additional days of school each grade (p <.05). No differences over time were observed by gender. The slope for Black students, however, was neutral over time compared to increasing days absent over time for Latino students (p <.05). No other effects were significant for change over time in attendance.

Table 10 displays the results for the *generational* analyses for attendance. The intercept coefficient revealed that students on average missed 5.973 days of school (p <.001) in third grade. Gender was not significant but race was. 1st-gen Black immigrant students missed 2 less days of school compared to 1st-gen Latino students in 3rd grade (p < .001). ELL students had higher initial attendance in third grade, missing 0.798 fewer days of school compared to non-ELL students (p < .05). No generation or interaction effects were significant for initial attendance rates.

The middle of Table 10 shows that the slope was significant, showing that students on average missed 0.365 more days of school each grade (p <.05). Females missed 0.259

fewer days of school each grade compared to males, (p <.05). No other slope effects were significant.

Suspension

Table 11 shows the results of the HLM. The results were unremarkable showing no significant effects involving immigrant status. ELL students were found to be less likely to be suspended in 3rd grade compared to native speakers of English (p < .05), and those in poverty were more likely to be suspended (p < .001).

Table 12 displays the results for the *generational* analyses. The only notable and significant finding was that among immigrant students, girls initially had 84%% less odds of being suspended compared to boys (p <.001) in third grade.

Retention

Table 13 shows the results for this analysis. The only significant results were that Black students had almost 3 times the odds of being retained compared to Latino students in third grade, p <.001. Also, although the main effect for immigrant status was not significant, the interaction between immigration and race in 3rd grade was significant (p < .05). Black immigrants in particular were 56% less likely to be suspended compared to other groups. This contrasts with the main effect for race in which Black students overall were 2.77 times more likely to be suspended. The middle of Table 13 shows the coefficients for slope. The only significant slope effect was for gender, with girls showing a slower reduction in retention rates over time compared to boys

The *generational* analysis for the comparison of retention between first-generation immigrant students and second-generation immigrant students is shown in Table 14.

Second-generation immigrant students were 2.368 times more likely to be retained compared for 1st generation students, evidence of first-generation immigrant advantage, ($p < .001$). The interaction terms were not significant. The middle of Table 14 shows the coefficients for change over time. No significant change over time effects were observed.

DISCUSSION

The general goal of this study was to determine whether the immigrant advantage persists over time in late elementary school. Previous studies have focused on the immigrant advantage in early childhood (Crosnoe & Turley, 2011; De Feyter et al., 2009; Pong, Hao, & Gardner 2005) and later disadvantage in adolescence (Rosenbaum & Rochford, 2008). It is important to focus on outcomes of immigrant students over time and disentangle at what point the immigrant advantage starts to become potentially a disadvantage. This particular information is very important for families of immigrant students, educators, and policymakers alike. Discovering when the immigrant advantage fades can help policymakers and researchers develop curriculum and interventions that may help immigrant students continuously succeed.

The current study, unlike many others however, used longitudinal data and observed a large set of authentic, ecologically valid, academic outcomes for Black and Brown immigrant and native-born students over time from 3rd through 5th grade. It was hypothesized that immigrant students would have initial immigrant advantage in third grade for all outcomes, but that paradoxically this might change at some point in time to a disadvantage. The results of the HLM growth models show that this hypothesis was supported for most outcomes. For FCAT math and reading, immigrant students scored higher on both tests initially. However, at each subsequent grade, the scores became

lower over time compared to scores of non-immigrant students which increased over time. This change is a clear indication of the immigrant paradox within child over time - immigrant status initially starting as an advantage but over time, the very same immigrant students underperforming relative to native-born children.

It is important to note that the state-wide averages for the FCAT scores provided by the Florida Department of Education actually increased over time, especially with regards to FCAT reading. For all students in the current sample, scores on reading decreased over time. Thus, the results indicate that these largely low-income immigrant and non-immigrant students in Miami are all losing ground over time compared to other Florida school children on standardized reading skills. This pattern may be due to the increasing complexity of the standardized tests. Our results showed that students with higher English proficiency received higher scores in each grade. Harder content requires more advanced English language proficiency. Some immigrant students who are not fully proficient in English may show decreasing scores over time as content becomes harder.

Another possibility is that the stress of being an immigrant student increases over time as they begin to take on more adult-like responsibilities at home and realize the tenuous position of the family with fears of deportation for undocumented immigrants (Goodman et al., 2017). We did not have information regarding legal status for any of the immigrant students in this sample. Our first-generation sample of students who, by definition, were not born in the USA (and thus do not have automatic citizenship) is particularly likely to include some undocumented immigrant families. The worry about documentation may become more apparent for students as they are becoming older,

which can affect their academic achievement. Abrego (2006) found that undocumented students were less likely to go to college, for example, because of fear of deportation. Undocumented students may encounter higher levels of stress not only due to acculturative stress, but also due to premigration traumatic experiences, familial separation, and economic strain (Alderete, Vega, Kolody, Aguilar-Gaxiola, 1999; Goodman et al., 2017; Vesely et al., 2017).

Although immigrant paradox was evident for math and reading scores, the pattern was not the same for end-of-year grades. For this outcome, immigrant students persistently received higher GPAs in all three years compared to non-immigrant students. In this case, immigrant status did not become a disadvantage over time, but remained an advantage throughout elementary school. Previous MSRP studies have found that immigrant students are perceived by teachers as being well-behaved compared to non-immigrant students (De Feyter et al., 2009). However, standardized tests are graded systematically, while classroom grades include some teacher subjectivity, which may explain the different results. Students may also be hindered by stereotype threat as students of color. Previous studies have found that students of color are likely to face the effects of stereotype threat reflected in their tests scores. Students of color score lower compared to other students when scoring high on stereotype measures (Osborne & Walker, 2006; Steel & Aronson, 1995). Immigrant students in particular show resiliency and may be better able to use such resiliency in a classroom context (requesting help from peers, teachers, family members and community members) compared to the test setting where no help is available.

Generational differences were noticeable as well for most academic outcomes. First-generation immigrant students initially scored higher in third grade, evidence of first-generation immigrant advantage. However, in fourth and fifth grade, first-generation immigrant student scores decreased and were lower compared to second-generation immigrant students. As previously mentioned, English proficiency may be playing an important role. As content becomes harder, English proficiency becomes more important. Many first-generation immigrants are less likely to be proficient in English compared to second-generation students. First-generation immigrant status in particular becomes a disadvantage and may reflect the importance of English proficiency for standardized tests.

Black Immigrant Advantage

The most unique results of this study compared to past studies what we learned about the role of race for immigrant student outcomes. The results showed that race was more important for immigrant outcomes than gender. In fact, once the immigrant outcomes are broken down by race, there was a clear difference between Black and Latino immigrants, with the difference in performance between Black immigrants and native-born African American students being typically larger and sustaining for longer periods of time than the immigrant gaps seen for Latino students. Black immigrant advantage has been noted individually in previous studies, however, investigators have not looked at differential immigrant outcomes based on race. Crosby and Dunbar (2012) found that Black immigrant students scored higher on academic measures in kindergarten compared to Black non-immigrant students. Results of the current study highlight that

Black immigrants in Miami seem to be excelling compared to Latino immigrant students despite facing potentially similar discrimination as Black non-immigrant students and attending the same schools and living in the same community.

Previous MSRP studies have shown similar results. Black immigrant boys showed better school attendance compared to Latino immigrant boys (Parada & Winsler, 2016). Similarly, De Feyter et al (2017) showed similar results for attendance, with Black immigrants attending school more compared to other immigrant students. However, what sets the current study apart from previous MSRP studies is the Black immigrant advantage was observed in real-world, high-stakes academic outcomes, such as end-of-year grades and FCAT math and reading. What may set Black immigrant students apart from Latino immigrant students is unclear. According to Kasinitz, Battle, and Miyares (2001), Black immigrant students from the West Indies have the great advantage to be native English speakers compared to Latino immigrants who may not have much experience with English. Caribbean-Black immigrant students are not placed in English language programs at the same rates as Latino immigrant students. Black immigrant students may also not identify with the immigrant experience as often as Latino immigrant students. Dathis Dorancy (2015) found that many Haitian immigrant students in Florida (including Miami-Dade where our sample is from) identified as Black and American before mentioning their immigrant identity. Ogbu and Simons (1998) explain that there are differences in the types of minorities in the U.S. For example, immigrants are voluntary minorities in search of better opportunities. However, involuntary

(nonimmigrant) minorities became part of the U.S. against their will, ultimately becoming a minority group such as Black Americas or Native Americans.

Despite Black immigrants facing discrimination as Black people, they may be have advantages such as higher English proficiency (Anderson, 2015), lower rates of poverty (Crosby & Dunbar, 2012), and stronger attitudes and motivation for achieving success (Ogbu & Simons, 1998). Black immigrants and Black non-immigrants (African Americans) can be considered two different groups of people with very different experiences and cultural histories. Black non-immigrants are African-Americans who have experienced generational histories of purposeful education denial and slavery, including the burden of "acting white" (Ogbu, 1995) and typically have fewer school resources (Rumberger & Palardy, 2005). Black immigrants typically do not identify as African Americans and often identify strongly with their country of origin instead (Rong & Brown, 2002. Teachers may perceive Black immigrants as immigrants before perceiving them as Black, causing a difference in experience for both Black immigrants and Black non-immigrants.

Implications

There are important implications for the current study. First and foremost, the race-by-immigrant interaction results indicates that immigrant students should not be treated as a monolithic group. Educational policymakers should consider that immigrant child outcomes may vary by race or, in some cases, by country of origin (De Feyter & Winsler, 2009). As indicated by our results, Latino immigrant students may need extra help with preparation for standardized tests compared to Black immigrants. Since

immigrants did better for outcomes such as GPA, teachers may be giving special attention to these students who may need the extra help. However, this is not the case for standardized test-taking situations. Thus, it is important that test makers take this into account and possibly provide a test that is at the appropriate level for the child instead of comparing them to state mean scores that do not reflect the same education experiences as immigrant students. This is especially important for counties such as Miami-Dade that have such a diverse population of students compared to the rest of Florida.

The fact that particularly first-generation students begin to do worse on math and reading test scores around 4th grade compared to native-born students despite starting off with an advantage in 3rd grade is disturbing and suggests that immigrant students are likely experiencing increasing stress starting at 4th grade. This population needs intervention and support services. Although there was evidence of initial immigrant paradox in our results, we cannot ignore the socio-political context in which immigrant students must navigate. Some immigrant students may have traveled to the U.S. as refugees, meaning that some may have premigration trauma that has not been resolved. Previous studies have shown that immigrants have many sources of stress throughout their lives including those of economic stress, stress due to immigrant and documentation status, poor living conditions, and familial separation (Goodman et al., 2017; Vesely et al., 2017). Although the immigrant students in the sample showed a pattern of decreasing scores for FCAT exams, we must not ignore the fact that there are several factors that contribute to academic outcomes. Interventions and school programs can help immigrant students with stress that they may be experience in their lives (Birman, Weinstein, Chan,

& Beehler, 2007). Programs and interventions targeted to relieve stress in immigrant students have shown to be effective in decreasing traumatic stress and increasing math skills (Rousseau et al., 2007). Future studies should include qualitative data to determine what exactly is going on after third grade that changes the academic trajectory of immigrant students.

Limitations

Limitations are always found in studies that uses administrative data. For this study, data were simply administrative data provided by MDCPS, so we had no qualitative information on the immigrant experience in the schools – feelings, motivations, struggles etc. Interviews from students may help explain what is going on between Black and Latino immigrants and what seems to be accounting for the changes observed around 4th grade. Reasons for the results are not captured through the administrative data provided to us and possibly can be captured through interviews in future research. Most of our sample was low-income children, thus, we had limited variability in socioeconomic status of our immigrants sample. Additionally, the sample included Black and Latino students only and did not include immigrants of other race/ethnicities. Black immigrants were primarily from the Caribbean. Thus, there may be differences for Black immigrants from Africa compared to those from the Caribbean.

Conclusion

Our main research question was to find if the immigrant advantage persisted over time from G3 to G5. Our findings found that for GPA and attendance, yes, the immigrant advantage persisted over time. For other outcomes (FCAT math and reading), immigrant

advantage disappeared and became a disadvantage over time. The question now becomes, what is going on around 4th grade that is responsible for this change that was observed that may prevent or hinder immigrant students from succeeding over time? This study was the first step to identify whether the immigrant advantage remains stable. However, the next steps include finding out what exactly may be causing this change. There may be a number of reasons why this is happening. Immigrant students were more likely to be less proficient in English, and English proficiency may be more important in later grades. Since many immigrant students were considered poor, immigrant students may be starting the feel cumulative, long-term effects of poverty on their academic outcomes. Additionally, it is important to note that Black and Latino immigrants make up only 8% and 17% (respectively) of college-educated, foreign-born adults (Zong & Batalova, 2016). As curriculum increases in complexity, Black and Latino immigrant parents may not be as accessible in helping their children as they were in previous grades. Thus, Latino immigrant students in particular may receive less help and may have a harder time understanding content compared to other immigrant students who may have more educated parents.

Future studies should focus on the relationship between race and immigrant status. Clearly there are differences in outcomes for immigrants of various ethnic and racial backgrounds. Immigrant outcomes varying by race have been found for Latino, Asian, and Black immigrants. Pao and colleagues (2008) found that Asian immigrants had better academic outcomes compared to Black and Latino immigrants. Previous studies have found variation in outcomes based on country of origin, such as lower math scores for

Southeast Asian immigrants compared to East Asian immigrants (Glick & Hohmann-Mariott, 2007). Thus, it is no surprise that there were differences in academic outcomes between immigrant and non-immigrant Black students. This is an important factor to keep in mind when designing programs for immigrant students how some students may have different needs compared to one others.

APPENDIX

Table 1.

Demographic Information for Immigrants Students

	First-Generation (*n* = 2,582)	**Second-Generation (*n* = 746)**	**Third-Generation (*n* = 813)**	**Overall (*N* = 4,141)**
% Gender				
Male	51.9	50.7	49.0	51.1
Female	48.1	49.3	51.0	48.9
% Ethnicity				
Hispanic/Latino	91.6	81.5	38.1	79.3
Black	8.4	18.5	60.9	20.7
% Free or Reduced Lunch (4^{th})	71.1	90.7	90.02	85.5
% ELL	95.8	86.5	24.5	80.1

Table 2.

Missing Data on All Variables

Outcome	Frequency (has any info)	% Missing
Suspension in 3rd Grade	4062	1.9
Suspension in 4th Grade	4052	2.1
Suspension in 5th Grade	3947	4.7
Retained info 3rd Grade	3978	3.9
Retained info 4th Grade	3911	5.6
Retained info 5th Grade	4141	0.0
FCAT math 3rd	4066	1.7
FCAT reading 3rd	4067	1.7
FCAT math 4th	4035	2.5
FCAT reading 4th	4037	2.5
FCAT math 5th	3915	5.3
FCAT reading 5th	3920	2.5
Mean grade 3rd grade	4060	2.0
Mean grade 4th grade	4048	2.2
Mean grade 5th grade	3944	4.8
Days absent 3rd grade	4139	0.0
Days absent 4th grade	4141	0
Days absent 5th grade	4035	2.6
Eng. Proficiency in 3rd grade	4141	0.0
Eng. Proficiency in 4th grade	4141	0.0
Eng. Proficiency in 5th grade	4141	0.0
Free/Reduced Price Lunch (3rd)	4140	0.0
Free/Reduced Price Lunch (4th)	4141	0.0
Free/Reduced Price Lunch (5th)	4035	2.6
ELL	4141	0.0
Race	4141	0.0
Gender	4141	0.0
Immigrant Status	4141	0.0

Table 3.

Hierarchical Linear Models for FCAT Math (Immigrant vs. Non-immigrant; N = 4,141)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	297.318	3.192	253	75.992	0.000
Gender (Female)	0.253	3.133	4134	0.081	0.936
Race (Black)**	-13.078	3.816	4134	-3.427	0.001
ELL**	17.949	3.907	4134	4.593	0.000
Immigrant Family**	22.523	3.711	4134	6.069	0.000
Race x Immigrant	5.756	4.523	4134	1.272	0.204
Gender x Immigrant	-2.609	3.824	4134	-0.682	0.495
*Grade Slope (P1)***	12.21	2.022	253	6.042	0.000
Gender (Female)	-1.54	1.597	4134	-0.965	0.335
Race (Black)	-1.94	2.204	4134	-0.880	0.379
ELL**	-8.40	2.100	4134	-4.000	0.000
Immigrant Family**	-22.45	2.148	4134	-10.45	0.000
Race x Immigrant*	7.66	3.294	4134	2.326	0.020
Gender x Immigrant	2.78	2.143	4134	1.301	0.194
*Proficiency Slope (P2)***	18.49	0.673	12000	27.481	0.000
*Lunch Slope (P3)***	-6.77	0.86	12000	-7.846	0.000
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	1919.8240	43.816	3789	9687.55	0.000
Grade Slope (R1)	621.9726	24.939	3789	69.142	0.000
Level- 1 (E)	1433.670	37.864			
Intercept1/Intercept2 (U00)	171.55	13.10	248	485.98	0.000
Grade/Intercept2 (U10)	29.050	5.390	248	354.31	0.000

* = p <.05; ** = p <.001

Table 4.

Hierarchical Linear Models for FCAT Math (*First- vs. Second-generation; N = 3,328*)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	321.73	4.800	238	67.058	0.000
Gender (Female)	-2.090	2.276	3321	-0.919	0.359
Race (Black)	-4.284	4.553	3321	-0.941	0.347
ELL**	22.145	4.534	3321	4.882	0.000
Second**	-30.484	3.555	3321	-8.547	0.000
Race x Second	8.495	6.913	3321	1.229	0.220
Gender x Second	-0.450	4.770	3321	-0.094	0.925
*Grade Slope (P1)***	-20.091	3.118	238	-6.443	0.000
Gender (Female)	1.418	1.500	3321	0.948	0.344
Race (Black)	3.628	2.906	3321	1.249	0.212
ELL*	-5.88	2.968	3321	-1.984	0.047
Second**	33.54	2.317	3321	14.480	0.000
Race x Second	-7.47	4.527	3321	-1.650	0.099
Gender x Second	-1.63	3.133	3321	-0.522	0.601
*Proficiency Slope (P2)***	18.94	0.770	9644	24.602	0.000
*Lunch Slope (P3)***	-7.182	0.956	9644	-7.515	0.000
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	1872.36	43.27	3013	7216.64	0.000
Grade Slope (R1)	577.88	24.04	3013	5183.55	0.000
Level- 1 (E)	1562.22	39.52			
Intercept1/Intercept2 (U00)	169.59	13.02	231	402.840	0.000
Grade/Intercept2 (U10)	33.88	5.820	231	310.599	0.000

* = p <.05; ** = p <.001

Table 5.

Hierarchical Linear Models for FCAT Reading (Immigrant vs. Non-immigrant; N = 4,141)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	312.81	4.252	253	73.560	0.000
Gender (Female)	-0.528	3.544	4134	-0.149	0.882
Race (Black)	-14.97	4.370	4134	-3.426	0.001
ELL*	12.18	3.971	4134	3.068	0.003
Immigrant Family	-0.349	3.820	4134	-0.091	0.928
Race x Immigrant*	10.44	5.203	4134	2.006	0.045
Gender x Immigrant	5.444	4.056	4134	1.342	0.180
*Grade Slope (P1)***	-12.93	1.838	253	-7.035	0.000
Gender (Female)*	3.894	1.706	4134	2.282	0.023
Race (Black)	-1.449	2.062	4134	-0.703	0.482
ELL*	-4.850	1.85	4134	-2.618	0.009
Immigrant Family*	-4.478	-2.589	4134	-1.952	0.010
Race x Immigrant*	6.002	2.378	4134	2.524	0.012
Gender x Immigrant	-2.189	2.022	4134	-1.083	0.280
*Proficiency Slope (P2)***	18.72	0.669	120008	27.972	0.000
*Lunch Slope (P3)***	-6.15	0.803	120008	-7.662	0.000
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*$\chi 2$*	*Sig.*
Intercept 1 (R0)	1803.07	42.46	3790	9849.10	0.000
Grade Slope (R1)	217.165	14.74	3790	5017.05	0.000
Level- 1 (E)	1278.69	35.76			
Intercept1/Intercept2 (U00)	159.87	12.64	248	496.52	0.000
Grade/Intercept2 (U10)	21.17	4.601	248	356.95	0.000

* = p <.05; ** = p <.001

Table 6.

Hierarchical Linear Models for FCAT Reading (First- vs. Second-generation; N = 3,328)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	302.886	5.500	238	55.066	0.000
Gender (Female)*	5.147	1.952	3321	2.636	0.009
Race (Black)	-4.919	3.798	3321	-1.295	0.196
ELL*	20.581	5.679	3321	3.624	0.001
Second	2.613	3.828	3321	0.683	0.495
Race x Second	7.109	6.116	3321	1.162	0.246
Gender x Second	-1.446	4.668	3321	-0.310	0.757
*Grade Slope (P1)***	-17.51	2.500	238	-7.016	0.000
Gender (Female)	1.14	1.254	3321	0.914	0.361
Race (Black)	3.149	2.402	3321	1.311	0.190
ELL*	-5.833	2.476	3321	-2.356	0.019
Second*	4.410	1.936	3321	2.278	0.023
Race x Second	0.092	3.646	3321	0.025	0.980
Gender x Second	2.309	2.240	3321	1.031	0.303
*Proficiency Slope (P2)***	19.22	0.696	9653	27.582	0.000
*Lunch Slope (P3)***	-7.182	0.887	9653	-7.928	0.000
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ2*	*Sig.*
Intercept 1 (R0)	1696.61	41.19	3013	7125.39	0.000
Grade Slope (R1)	223.847	14.96	3013	3916.44	0.000
Level- 1 (E)	1404.13	37.43			
Intercept1/Intercept2 (U00)	139.19	11.798	231	408.50	0.000
Grade/Intercept2 (U10)	21.834	4.672	231	321.56	0.000

* = p <.05; ** = p <.001

Table 7.

Hierarchical Linear Models for End-of-year Grades (Immigrant vs. Non-immigrants; N = 4,141)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	3.838	0.042	253	91.313	0.000
Gender (Female)*	0.224	0.043	4134	5.184	0.000
Race (Black)**	-0.225	0.044	4134	-5.176	0.000
ELL	-0.042	0.032	4134	-1.307	0.191
Immigrant Family**	0.239	0.043	4134	5.586	0.000
Race x Immigrant	0.042	0.052	4134	0.817	0.414
Gender x Immigrant	-0.012	0.046	4134	-0.256	0.798
Grade Slope (P1)	0.014	0.019	253	0.740	0.460
Gender (Female)	-0.006	0.020	4134	-0.337	0.736
Race (Black)*	0.053	0.020	4134	2.617	0.009
ELL	0.011	0.015	4134	0.785	0.432
Immigrant Family	-0.014	0.018	4134	-0.806	0.420
Race x Immigrant*	-0.051	0.022	4134	-2.301	0.021
Gender x Immigrant	0.025	0.020	4134	1.219	0.223
*Proficiency Slope (P2)***	0.117	0.006	12036	19.366	0.00
*Lunch Slope (P3)***	-0.0433	0.007	12036	-6.521	0.00
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	0.202	0.449	3822	16130.01	0.000
Grade Slope (R1)	0.012	0.109	3811	4985.79	0.000
Level- 1 (E)	0.073	0.269			
Intercept1/Intercept2 (U00)	0.027	0.163	249	640.45	0.000
Grade/Intercept2 (U10)	0.005	0.072	249	653.74	0.000

* = p <.05; ** = p <.001

Table 8.

Hierarchical Linear Models for End-of-year Grades (First- vs. Second-generation; N= 3,328)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	4.178	0.042	238	100.40	0.000
Gender (Female)**	0.198	0.020	3321	9.950	0.000
Race (Black)**	-0.186	0.040	3321	-4.671	0.000
ELL*	-0.099	0.039	3321	-2.503	0.013
Second**	-0.228	0.039	3321	-5.825	0.000
Race x Second	0.070	0.059	3321	1.181	0.238
Gender x Second	0.053	0.042	3321	1.279	0.201
Grade Slope (P1)	-0.009	0.020	238	-0.438	0.661
Gender (Female)*	0.024	0.008	3321	2.930	0.004
Race (Black)	-0.004	0.0217	3321	-0.167	0.868
ELL	0.014	0.018	3321	0.775	0.438
Second	0.023	0.018	3321	1.285	0.199
Race x Second	0.003	0.0319	3321	0.166	0.908
Gender x Second	-0.316	-.0184	3321	-1.715	0.086
*Proficiency Slope (P2)***	0.124	0.006	9686	20.623	0.000
*Lunch Slope (P3)***	-0.038	0.006	9686	-5.612	0.000
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ2*	*Sig.*
Intercept 1 (R0)	0.1887	0.434	3040	12829.76	0.000
Grade Slope (R1)	0.0113	0.107	3040	3966.65	0.000
Level- 1 (E)	0.260	0.068			
Intercept1/Intercept2 (U00)	0.026	0.161	233	576.46	0.000
Grade/Intercept2 (U10)	0.004	0.645	233	536.09	0.000

* = p <.05; ** = p <.001

Table 9.

Hierarchical Linear Models for Attendance (Immigrant vs. Non-immigrants; N = 4,141)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	7.129	0.461	253	15.451	0.000
Gender (Female)	-0.578	0.454	4134	-1.271	0.204
Race (Black)	-0.213	0.519	4134	-0.411	0.681
ELL*	-0.891	0.391	4134	-2.279	0.023
Immigrant Family	-1.018	0.542	4134	-1.876	0.060
Race x Immigrant*	-2.003	0.537	4134	-3.732	0.000
Gender x Immigrant	-.7811	0.506	4134	1.544	0.122
*Grade Slope (P1)**	0.556	0.245	253	2.275	0.024
Gender (Female)	-0.195	0.256	4134	-0.761	0.447
Race (Black)*	-0.587	0.285	4134	-2.063	0.039
ELL	-0.082	0.164	4134	-0.500	0.617
Immigrant Family	-0.074	0.265	4134	-0.279	0.780
Race x Immigrant	0.343	0.291	4134	1.178	0.239
Gender x Immigrant	0.004	0.273	4134	0.013	0.990
*Proficiency Slope (P2)***	-0.362	0.099	12299	-3.66	0.000
*Lunch Slope (P3)***	0.392	0.078	12299	5.007	0.000
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	20.01	4.47	3881	10584.43	0.000
Grade Slope (R1)	1.697	1.302	3881	4752.65	0.000
Level- 1 (E)	13.16	3.63			
Intercept1/Intercept2 (U00)	1.54	1.240	253	591.22	0.000
Grade/Intercept2 (U10)	0.037	0.193	253	395.30	0.000

* = p <.05; ** = p <.001

Table 10.

Hierarchical Linear Models for Attendance (First- vs. Second-generation; N = 3,328)

	Coefficient	*Std. Error*	*df*	*t*	*Sig.*
*Intercept (B00)***	5.973	0.042	238	14.389	0.000
Gender (Female)	0.226	0.214	3321	1.053	0.293
Race (Black)*	-1.981	0.324	3321	-6.108	0.000
ELL*	-0.798	0.376	3321	-2.121	0.034
Second	0.380	0.334	3321	1.136	0.256
Race x Second	-0.747	0.537	3321	-1.391	0.164
Gender x Second	-0.158	0.492	3321	-0.321	0.748
*Grade Slope (P1)**	0.365	0.181	238	2.022	0.044
Gender (Female)*	-0.259	0.106	3321	-2.450	0.015
Race (Black)	-0.243	0.140	3321	-1.734	0.083
ELL	0.014	0.170	3321	0.082	0.935
Second	0.159	0.187	3321	0.847	0.397
Race x Second	-0.089	0.242	3321	-0.367	0.713
Gender x Second	0.284	0.231	3321	1.228	0.220
*Proficiency Slope (P2)***	-0.353	0.098	9877	-3.611	0.001
*Lunch Slope (P3)***	0.300	0.085	9877	3.523	0.001
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	18.82	4.28	3083	9123.14	0.000
Grade Slope (R1)	1.985	1.409	3083	4125.47	0.000
Level- 1 (E)	10.40	3.225			
Intercept1/Intercept2 (U00)	1.831	1.353	238	608.82	0.000
Grade/Intercept2 (U10)	0.005	0.068	238	354.63	0.000

* = p <.05; ** = p <.001

Table 11.

Hierarchical Non-Linear Models for Suspension (Immigrant vs. Non-immigrants; N = 4,141)

	Coefficient	*Std. Error*	*df*	*Odds Ratio*	*Sig.*
*Intercept (B00)***	-3.487	0.515	253	0.030	0.000
Gender (Female)	-0.548	0.322	4134	0.578	0.088
Race (Black)	0.340	0.546	4134	1.405	0.533
ELL	-0.821	0.365	4134	0.440	0.025
Immigrant Family	-0.498	0.560	4134	0.678	0.374
Race x Immigrant	0.322	0.705	4134	1.380	0.647
Gender x Immigrant	-0.706	0.436	4134	0.493	0.105
Grade Slope (P1)	0.344	0.328	253	1.411	0.296
Gender (Female)	-0.126	0.200	4134	0.881	0.524
Race (Black)*	0.185	0.347	4134	1.203	0.594
ELL	0.312	0.276	4134	1.366	0.259
Immigrant Family	0.089	0.360	4134	1.093	0.804
Race x Immigrant	-0.185	0.414	4134	0.831	0.656
Gender x Immigrant	0.152	0.285	4134	1.164	0.592
Proficiency Slope (P2)	-0.113	0.088	12045	0.894	0.201
*Lunch Slope (P3)***	0.653	0.158	12045	1.922	0.000
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*$\chi 2$*	*Sig.*
Intercept 1 (R0)	1.01	1.01	3823	1018.10	>.500
Grade Slope (R1)	0.06	0.24	3823	1015.25	>.500
Intercept1/Intercept2 (U00)	0.762	0.873	249	228.28	>.500
Grade/Intercept2 (U10)	0.143	0.377	249	15513	>.500

* = p <.05; ** = p <.001

Table 12.

Hierarchical Non-Linear Models for Suspension (First- vs. Second-generation; N = 3,328)

	Coefficient	*Std. Error*	*df*	*Odds Ratio*	*Sig.*
*Intercept (B00)***	-4.26	0.592	238	0.016	0.000
Gender (Female)**	-1.783	0.541	3321	0.168	0.001
Race (Black)	0.800	0.664	3321	2.227	0.229
ELL	-0.767	0.542	3321	0.464	0.157
Second	0.504	0.405	3321	1.655	0.214
Black X Second	-0.480	0.934	3321	0.619	0.567
Female X Second	1.080	0.790	3321	2.946	0.171
Grade Slope (P1)	0.511	0.373	238	1.671	0.172
Gender (Female)	0.172	0.322	3321	1.188	0.592
Race (Black)*	0.033	0.411	3321	1.035	0.937
ELL	0.182	0.344	3321	1.199	0.597
Second	0.015	0.234	3321	1.016	0.951
Black X Second	-0.208	0.554	3321	0.812	0.707
Female X Second	-0.117	0.099	3321	0.792	0.238
Proficiency Slope (P2)	-0.117	0.099	9690	0.890	0.238
*Lunch Slope (P3)***	0.609	0.187	9690	1.841	0.002
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	1.05	1.02	3041	708.29	>.500
Grade Slope (R1)	0.06	0.24	3041	665.29	>.500
Intercept1/Intercept2 (U00)	0.57	0.76	233	143.67	>.500
Grade/Intercept2 (U10)	0.19	0.44	233	125.24	>.500

* = p <.05; ** = p <.001

Table 13.

Hierarchical Non-Linear Models for Retained (Immigrant vs. Non-immigrant; N = 4,141)

	Coefficient	*Std. Error*	*df*	*Odds Ratio*	*Sig.*
*Intercept (B00)***	-2.978	0.305	253	0.059	0.000
Gender (Female)	-0.165	0.234	4134	0.848	0.482
Race (Black)*	1.020	0.309	4134	2.774	0.001
ELL	0.440	0.250	4134	1.552	0.079
Immigrant	-0.570	0.324	4134	0.565	0.079
Race x Immigrant*	-0.828	0.387	4134	0.437	0.032
Gender x Immigrant	-0.248	0.271	4134	0.780	0.362
Grade Slope (P1)	-1.868	0.430	253	0.156	0.000
Gender (Female)*	0.673	0.305	4134	1.960	0.027
Race (Black)	0.305	0.357	4134	1.357	0.393
ELL	0.132	0.286	4134	1.142	0.643
Immigrant	0.403	0.451	4134	1.496	0.372
Race x Immigrant	0.014	0.469	4134	1.014	0.977
Gender x Immigrant	-0.773	0.418	4134	0.462	0.064
*Proficiency Slope (P2)***	-0.408	0.049	11544	0.665	0.000
*Lunch Slope (P3)***	0.228	0.101	11544	1.256	0.023
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	1.67	1.29	3642	1349.43	>.500
Grade Slope (R1)	0.07	0.26	3642	329.85	>.500
Intercept1/Intercept2 (U00)	0.28	0.53	248	240.02	>.500
Grade/Intercept2 (U10)	0.16	0.40	248	116.76	>.500

* = p <.05; ** = p <.001

Table 14.

Hierarchical Non-Linear Models for Retained (First- vs. Second-generation; N = 3,328)

	Coefficient	*Std. Error*	*df*	*Odds Ratio*	*Sig.*
*Intercept (B00)***	-3.763	0.421	238	0.023	0.000
Gender (Female)	-0.322	0.182	3321	0.724	0.076
Race (Black)	0.367	0.283	3321	1.444	0.195
ELL	0.456	0.402	3321	1.578	0.256
Second**	0.862	0.207	3321	2.368	0.000
Race X Second	-0.659	0.559	3321	0.517	0.239
Gender X Second	-0.281	0.324	3321	0.755	0.387
*Grade Slope (P1)**	-1.595	0.607	3321	0.203	0.009
Gender (Female)	-0.278	0.363	3321	0.757	0.443
Race (Black)*	0.413	0.381	3321	1.510	0.280
ELL	0.124	0.598	3321	1.133	0.836
Second	-0.095	0.338	3321	0.909	0.778
Race X Second	-0.295	0.652	3321	0.744	0.650
Gender X Second	0.507	0.581	3321	1.661	0.383
*Proficiency Slope (P2)***	-0.456	0.052	9298	0.628	0.000
Lunch Slope (P3)	0.186	0.123	9298	1.204	0.132
Random Effects	*Var. Comp.*	*Std. Error*	*df*	*χ^2*	*Sig.*
Intercept 1 (R0)	1.02	1.01	2901	1044.52	>.500
Grade Slope (R1)	0.01	0.64	2901	233.04	>.500
Intercept1/Intercept2 (U00)	0.43	0.66	232	238.58	>.500
Grade/Intercept2 (U10)	0.21	0.46	232	89.97	>.500

* = p <.05; ** = p <.001

Figure 1. *Race-by-Immigrant status interaction for FCAT Math scores*

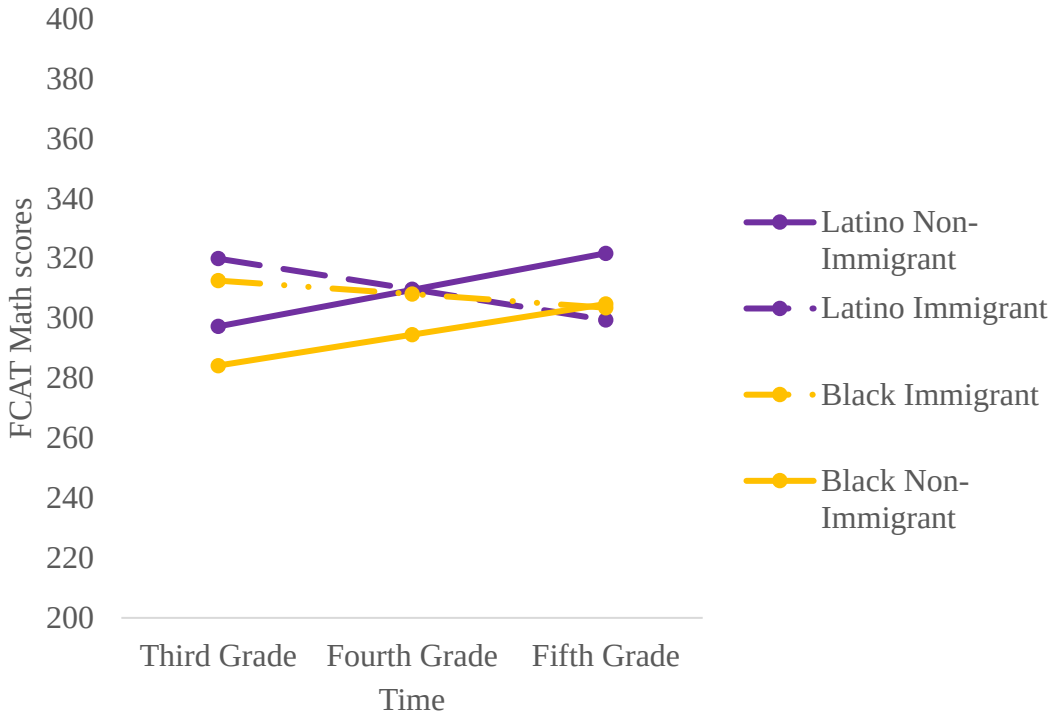


Figure 2. *FCAT Math scores for First-generation immigrants and Second-generation immigrants*

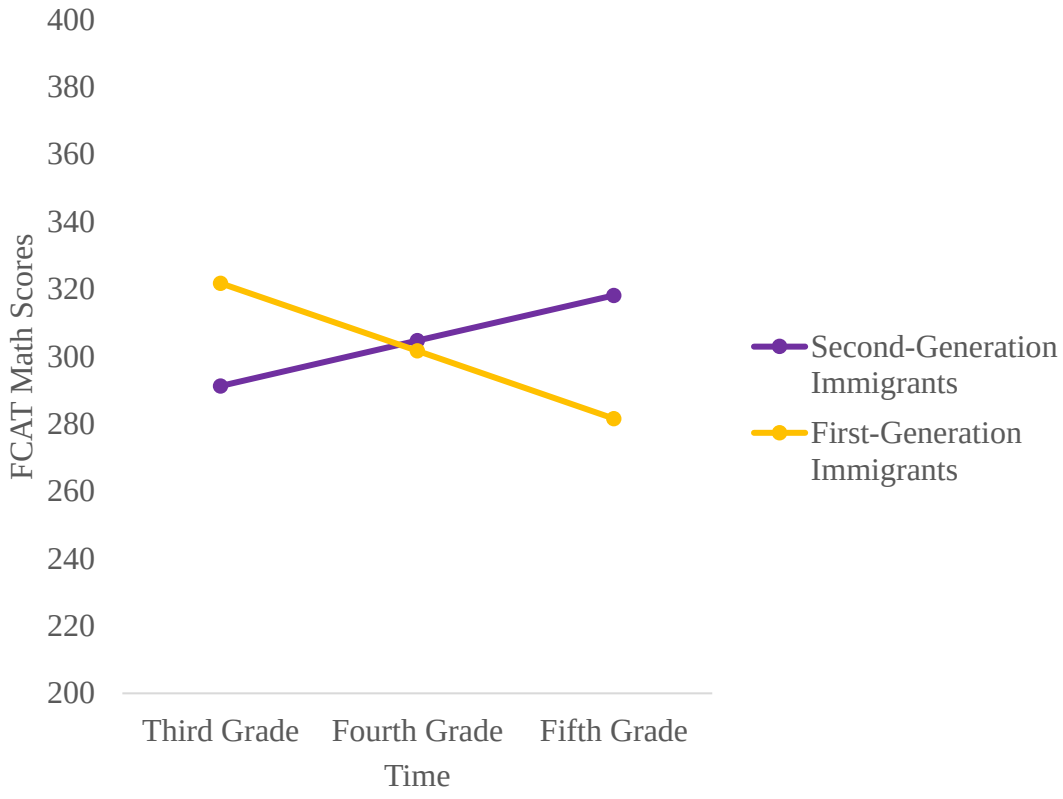


Figure 3. *Race-by-Immigrant status interaction for FCAT Reading scores*

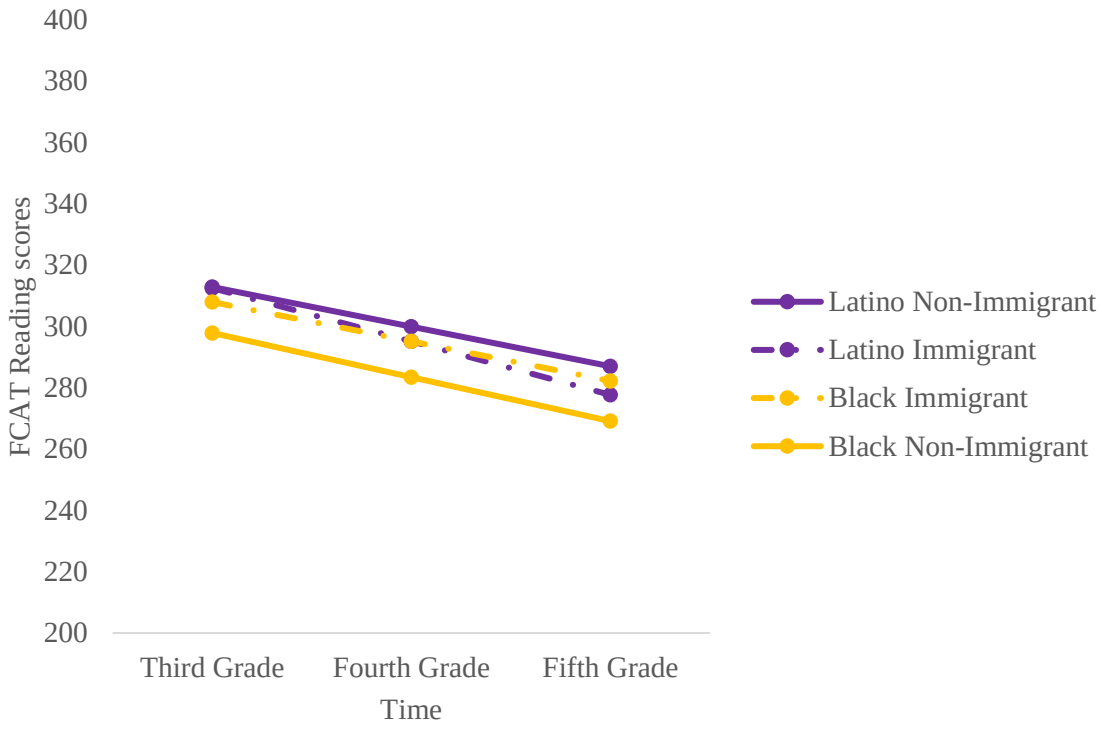


Figure 4. *FCAT Reading Scores for First-generation and Second-generation students*

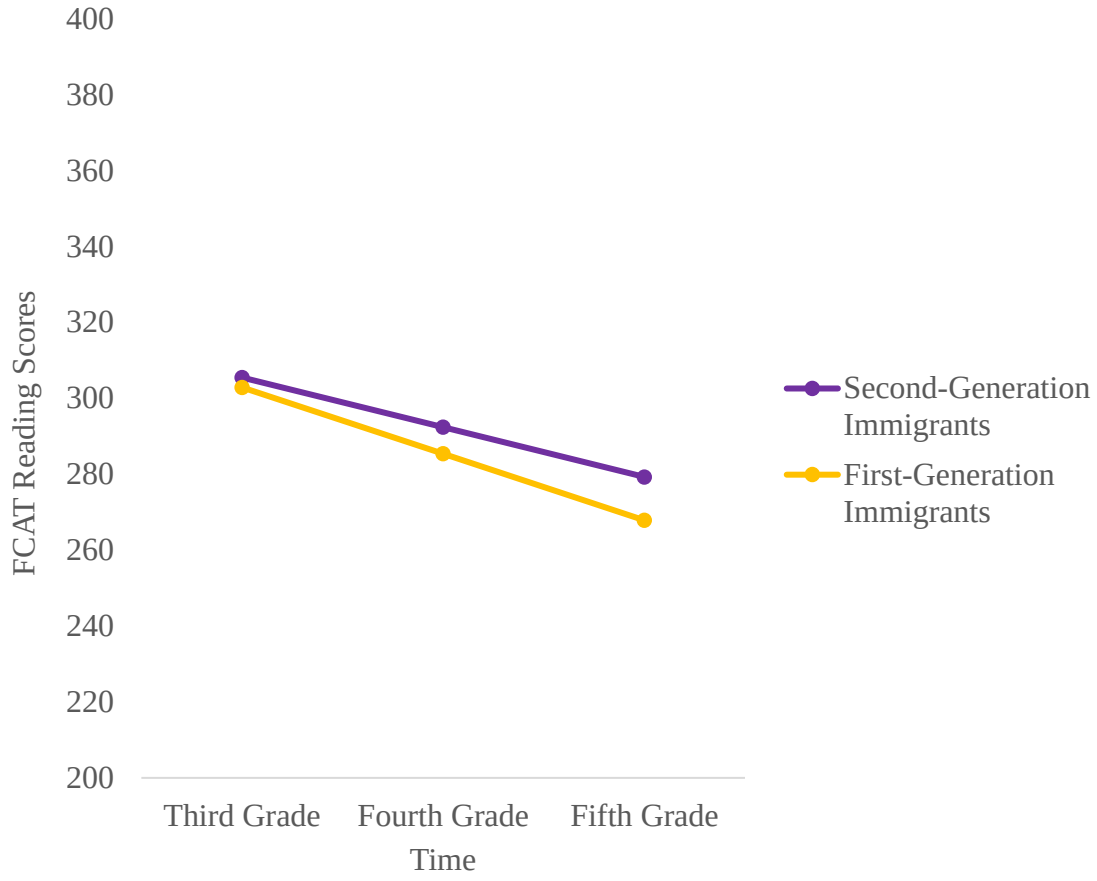


Figure 5. *Race-by-Immigrant status interaction for End-of-year Grades*

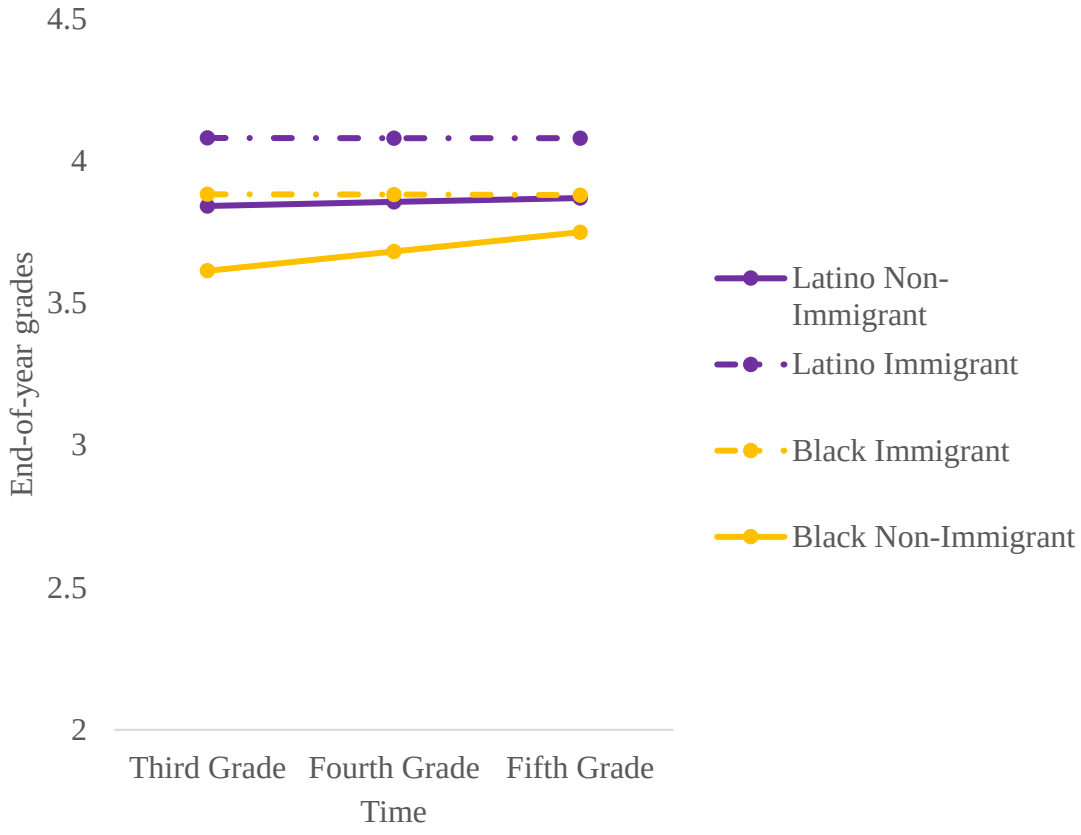


Figure 6. *End-of-year Grades for First-generation immigrants and Second-generation immigrants*

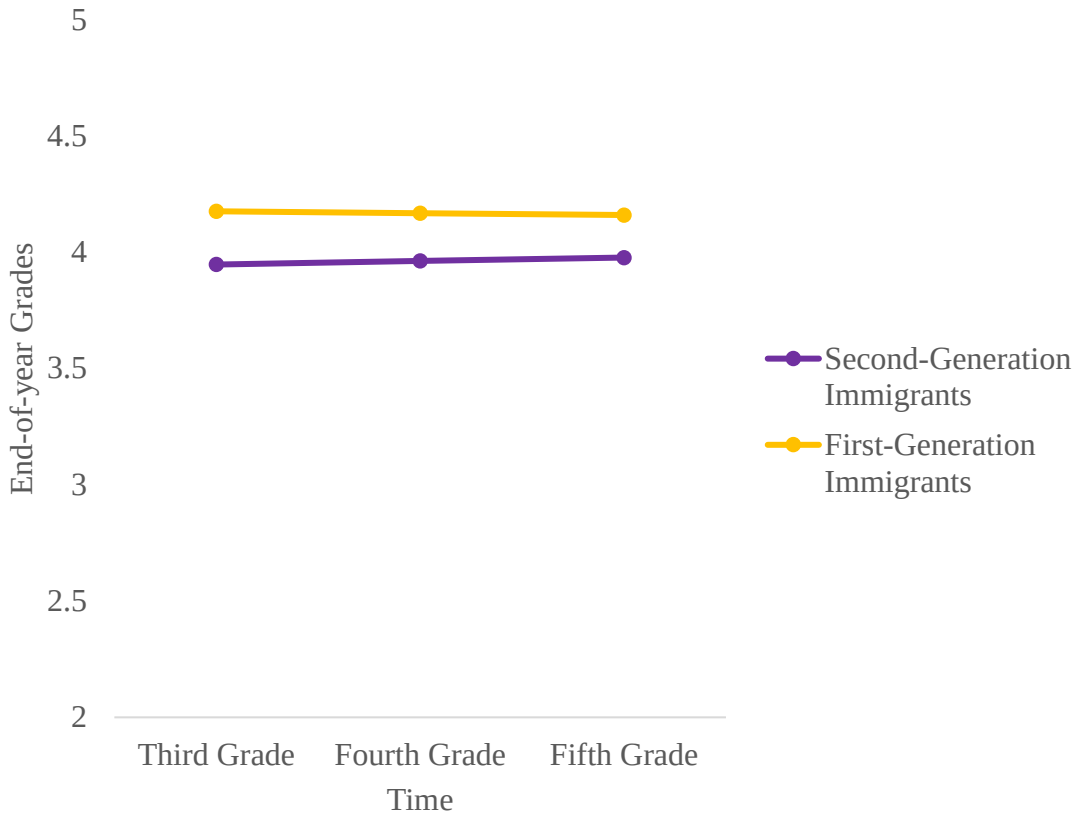
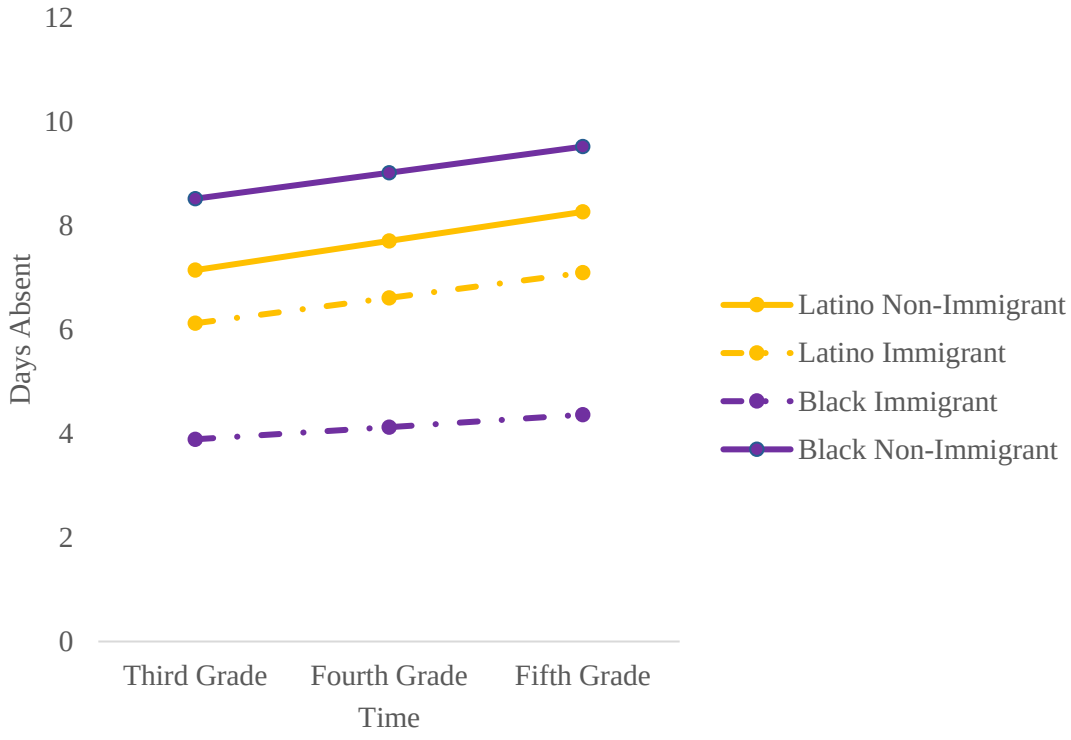


Figure 7. *Race-by-Immigrant status interaction for Attendance*



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BIOGRAPHY

Mayra Parada graduated from C. D. Hylton High School in Woodbridge, Virginia. She received her Bachelor of Science from Virginia Commonwealth University (VCU) in 2014. During her time at VCU, Mayra was a Research Assistant in the Clark-Hill Institute for Positive Youth Development working on various community-based participatory research projects, including a school-wide bullying intervention program in Richmond Public Schools and a strength-based family program to improve communication between adolescents in middle school and parents. After graduating from VCU, Mayra became a Research Trainee in the NIH/NIMHD-funded Minority Health and Health Disparities International Research Training Program. As a Research Trainee, Mayra had the opportunity to conduct research in Mexico City, Mexico at the National Institute of Psychiatry on the influence of social contexts on adolescent drug-use. Mayra's research interests include the effect of culture, race, and ethnicity (specifically with immigrant children) on academic achievement.